FINAL

KC-46A FORMAL TRAINING UNIT (FTU) AND FIRST MAIN OPERATING BASE (MOB 1) BEDDOWN EIS

EXECUTIVE SUMMARY

Prepared for:
Air Force Civil Engineer Center
Air Mobility Command
Air Education and Training Command
United States Air Force

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This document is the Executive Summary (ES) of the Final Environmental Impact Statement (EIS) for the KC-46A Formal Training Unit (FTU) and First Main Operating Base (MOB 1) Beddown. The entire Final EIS is contained on the Compact Disk (CD) in the pocket below.

To view the Final EIS on CD, you will need Adobe Acrobat ® Reader. If you do not already have Adobe Acrobat ® Reader, you can download it at www.adobe.com.

- Insert the CD into your computer's CD drive and double-click on the file in the CD directory.
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The CD files are read-only, which means that you can view and/or print them. A printed copy of the Final EIS for the KC-46A Formal Training Unit (FTU) and First Main Operating Base (MOB 1) Beddown, is available at public libraries in Altus, Oklahoma; Spokane, Washington; Grand Forks, North Dakota; and Wichita, Kansas. The Final EIS is also available online at http://www.kc-46a-beddown.com.

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EXECUTIVE SUMMARY

This Executive Summary (ES) is designed to direct the reader to the KC-46A Formal Training Unit (FTU) and First Main Operating Base (MOB 1) Final Environmental Impact Statement (EIS). A CD containing the complete Final EIS is provided on the inside front cover of this Final ES.

ES 1.0 PROPOSED ACTION OVERVIEW

The potential environmental consequences of the U.S. Air Force (USAF) intent to beddown the KC-46A FTU and MOB 1 at active-duty Air Force Bases (AFBs) in the continental United States (CONUS) are evaluated in the Final EIS. The USAF has selected the KC-46A as the newest aerial refueling aircraft to replace a portion of the aging fleet of KC-135 Stratotankers.

The Final EIS has been prepared to provide the decision maker (Secretary USAF) and the public the information required to understand the future potential impacts of the decisions that may be made regarding beddown of the FTU and the MOB 1 missions for the KC-46A. This ES is designed to provide an overview of the requirements for and potential impacts of the basing of the FTU and MOB 1 missions or scenarios at each of the alternative bases. This ES is organized in a similar manner to the EIS to assist the reader in locating the supporting details and comprehensive evaluation provided in the EIS.

Two alternative bases were evaluated for the FTU mission and four alternative bases were evaluated for the MOB 1 mission (see Figure ES-1). Although individual bases were considered for both the FTU and MOB 1 missions, no base would be selected to host both.

- FTU Scenario Alternative Bases
  - Altus AFB, Oklahoma
  - McConnell AFB, Kansas
- MOB 1 Scenario Alternative Bases
  - Altus AFB, Oklahoma
  - Fairchild AFB, Washington
  - Grand Forks AFB, North Dakota
  - McConnell AFB, Kansas

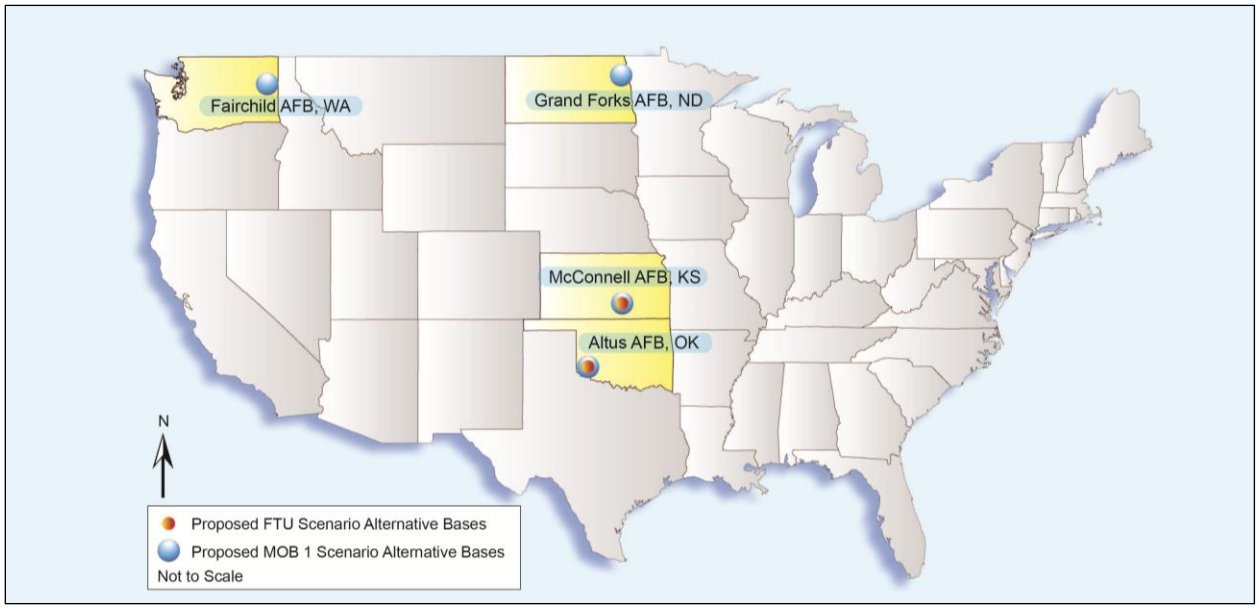

Figure ES-1. Alternative FTU and MOB 1 Basing Locations

Aircraft are scheduled to begin arriving at the FTU and MOB 1 bases in 2016. The FTU mission is scheduled to have up to eight aircraft in one training squadron by the end of 2021. The MOB 1 mission is scheduled to have 36 aircraft by 2019 in three operational squadrons.

ES 1.1 PURPOSE OF AND NEED FOR THE ACTION

The proposed actions to establish the FTU and MOB 1 are intended to (1) effectively train required crew and support personnel at the FTU and (2) provide a fully capable, combat operational KC-46A aerial refueling force at the MOB 1 to accomplish aerial refueling and related missions. Bedding down and operating the KC-46A will allow the USAF to maintain combat capability and mission readiness as U.S. military resources are committed to missions throughout the world.

The KC-46A FTU and MOB 1 beddowns are needed to support the recapitalization of the USAF's aging refueling aircraft fleet. In April 2006, the USAF completed an Analysis of Alternatives to determine the most appropriate strategy to recapitalize the existing KC-135 fleet of aerial refueling aircraft. Based on this analysis, the USAF concluded that a commercial derivative replacement tanker would result in the best value to the United States. Congress funded the KC-46A to update the current aerial refueling fleet; the KC-46A is the first phase of a three phase recapitalization of the tanker fleet. The KC-46A will be equipped with technological improvements designed to enhance operations and increase mission effectiveness.

ES 1.2 PUBLIC AND AGENCY INVOLVEMENT

The public scoping period for the EIS began on 26 March 2013 with publication of the notice of intent in the *Federal Register*. During the following weeks, four public scoping meetings were held in the communities near the four bases and notification letters were mailed to Federal, state, and local agencies; elected officials; federally recognized tribes (tribes)[1]; nongovernmental organizations; and interested individuals.

The USAF determined, in coordination with the U.S. Fish and Wildlife Service (USFWS) and state wildlife agencies, that there are no Federal or state threatened or endangered species in the regions of influence (ROIs) in which either of the KC-46A scenarios would take place; therefore, no further consultation was required.

The 45-day Draft EIS public review process began on 25 October 2013 with the publication of the Notice of Availability (NOA) of the Draft EIS in the *Federal Register*. During the following weeks, copies of the Draft EIS and ES were made available at local libraries and sent to those on the mailing list. During the public review period, four public hearings were held in the communities near the four bases. The public review period ended on 9 December 2013. Comment submittals were received by mail, website, or as written/oral inputs from the hearings. Some of the comments were related to the proposed action and alternatives and concerns about the environmental consequences, and some expressed support for bringing the KC-46A mission to the local base.

[1] Per Department of Defense Instruction (DoDI) 4710.02, *DoD Interactions with Federally-Recognized Tribes*, "tribe" refers to a federally recognized Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges (DoDI 4710.02, Section 3.5).

ES 2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

The FTU and MOB 1 bases will require facilities, personnel, infrastructure, and airspace where KC-46A aircraft can be located and operated with the capability for crews and aircraft to perform all the activities and training necessary to be combat capable. The KC-46A FTU and MOB 1 scenarios would utilize the classic association of crews, which pair active-duty host units with a reserve component associate unit to improve operational synergies and add capacity during surge operations at a reduced cost. Table ES-1 provides an overview of key elements associated with the KC-46A FTU or MOB 1 beddown with the potential to affect environmental resources at the base or under the training airspace.

Table ES-1. Overview of Requirements for the KC-46A FTU and MOB 1 Beddown

The proposal for the KC-46A FTU or MOB 1 beddown involves implementing several related elements at a selected base.

Elements Affecting the Base

- ✓ For the FTU, the beddown of up to eight KC-46A aircraft in one squadron in accordance with the aircraft delivery schedule
- ✓ For MOB 1, the beddown of 36 KC-46A aircraft in three squadrons in accordance with the aircraft delivery schedule
- ✓ Depending on mission, conduct sorties at each base for pilot, copilot, and boom operator training/certification, aerial refueling operations, and global reach missions
- ✓ Renovate, construct, and manage facilities and infrastructure necessary to support the mission
- ✓ Implement personnel changes (increases or decreases) at the base to conform to mission requirements

ES 2.1 KC-46A MISSION-SPECIFIC REQUIREMENTS

Although objective criteria were used to identify the alternative bases for the FTU and MOB 1 missions, there are also specific infrastructure, personnel, and aircraft operations requirements for each mission.

ES 2.1.1 KC-46A FTU and MOB 1 Infrastructure Requirements

Because of the inherent mission and squadron differences between the FTU and the MOB 1 missions, different types and numbers of facilities are required for each mission.

Each alternative base is required to have a functional runway (minimum 147 feet wide and 7,000 feet long, with a 415,000-pound weight-bearing capacity) with radar approach control, instrument landing system, and tactical air navigation systems and appropriate fuel supplies, storage, and distribution systems to support the new aircraft.

A variety of other service-type facilities and infrastructure could be required to support the mission depending on the facilities and infrastructure available at each base. These could include child development centers (CDCs), utilities, roads, taxiways, overruns, dining facilities, fitness center, Visiting Quarters, dormitories, and possibly new housing.

Initial Operational Testing and Evaluation (IOT&E) would occur at the base selected to host the MOB 1 mission. KC-46A aircraft operations during IOT&E would be very similar to existing KC-135 operations occurring at the base. Until specific operational procedures are developed for the KC-46A, the USAF would use operational procedures developed for the KC-135 aircraft.

ES 2.1.2 KC-46A FTU and MOB 1 Personnel Requirements

The KC-46A FTU and MOB 1 scenarios both require sufficient personnel to operate and maintain the aircraft and to provide necessary support services. Depending on the existing personnel, including the reserve or guard component of the mission at the selected base, the proposed personnel requirements for the FTU scenario are identified in the Final EIS in Tables 2-4 and 2-16 for Altus and McConnell AFBs respectively. The proposed personnel requirement for the MOB 1 scenario are identified in the Final EIS in Tables 2-7, 2-10, 2-13 and 2-19 for all four bases. In addition to the personnel required to support the mission, the family members or dependents of military personnel are also included in the analysis. Family members and dependents were estimated at 2.5 times 65 percent of the full-time military personnel. School-age dependents of full-time military personnel were estimated at 1.5 times 65 percent of full-time military personnel.

ES 2.1.3 KC-46A FTU and MOB 1 Flight Operations

KC-46A aircrews associated with the FTU scenario would focus on training to develop the capability needed for all mission requirements. Aircrew training would mirror the current training required by the KC-135 FTU at Altus AFB. Details of the proposed KC-46A FTU aircraft operations are identified in Tables ES-4 and ES-12. Aircrews associated with the MOB 1 would fly a combination of training and mission sorties. Most training sorties would perform about 12 operations per sorties with approximately 90 percent occurring during the day and 10 percent at night. MOB 1 aircrews would not use auxiliary airfields. Details of the proposed KC-46A MOB 1 aircraft operations are identified in Tables ES-6, ES-8, ES-10 and ES-14.

KC-46A aircrews would use the same airspace, air refueling (AR) tracks and fuel jettison areas, if necessary as currently used by the KC-135 aircraft at Altus, Fairchild and McConnell AFBs and formerly at Grand Forks AFB.

ES 2.2 PREFERRED ALTERNATIVES

The USAF identified Altus AFB as the Preferred Alternative for the FTU mission and McConnell AFB as the Preferred Alternative for the MOB 1 mission. Fairchild and Grand Forks AFBs were identified as reasonable alternatives for the MOB 1 mission. These bases are evaluated for the MOB 1 scenario throughout the EIS and McConnell AFB is evaluated as an alternative for the FTU scenario. For each of the preferred and reasonable alternatives, a site-specific description of the basing requirements for the beddown and operation of the KC-46A mission is presented. Depending on the base and the mission proposed for that base, the proposed action would either add to current missions or replace the current KC-135 mission.

In addition to the preferred and reasonable alternatives, a No Action Alternative is also considered in this EIS in conformance with the Council on Environmental Quality (CEQ) regulations (40 *Code of Federal Regulations* [CFR] 1502.14[d]). The No Action Alternative constitutes the baseline conditions, in which the KC-46A beddown would not occur at any base at this time, and the current mission would continue at each base.

ES 2.3 ALTUS AFB FTU SCENARIO PREFERRED ALTERNATIVE

Altus AFB is located in the southwestern corner of Oklahoma, adjacent to the City of Altus. Altus AFB is currently home to the 97th Air Mobility Wing, which provides formal initial and advanced specialty training for the C-17 Globemaster and the KC-135 Stratotanker aircrews. The current aircraft inventory at Altus AFB includes 17 C-17 aircraft and 18 KC-135 aircraft.

ES 2.3.1 Facilities and Infrastructure Projects

The FTU scenario would be additive to the existing missions at Altus AFB. Some of the facilities requirements are met through existing facilities, however, some modifications and additions to existing facilities and infrastructure would be required. Table ES-2 summarizes the KC-46A FTU-related facility and infrastructure projects by construction category and Figure ES-2 displays these projects. Existing flight operations and refueling activities associated with the C-17 and KC-135 FTUs would continue during demolition and reconstruction activities.

Table ES-2. Facilities and Infrastructure Projects for the FTU Scenario at Altus AFB

Project Type	Area (Square Feet)
Demolition	36,733
Renovation	13,237
New Construction	82,611
Additions/Alterations	54,317

ES 2.3.2 Personnel Requirements

Implementation of the FTU scenario at Altus AFB would increase the population by approximately 578 people, which includes 144 full-time military personnel, 234 dependents of full-time military personnel only, and 200 students. This number does not include the 252 U.S. Department of Defense (DoD) civilians, 20 part-time Reservists, and 23 contractors associated with the FTU scenario at Altus AFB under the assumption that these individuals would be from the local population and would not represent an in-migration of people to the area.

ES 2.3.3 Flight Operations

Table ES-3 provides a comparison of the existing airfield operations relative to the proposed KC-46A aircraft operations anticipated with implementation of the FTU scenario at Altus AFB. The table shows that the total annual operations at Altus AFB would increase from 109,459 per year to 150,823, resulting in an approximate 38 percent increase in annual aircraft operations.

Table ES-3. Altus AFB Baseline and Projected FTU Scenario End-State Airfield Operations[a]

Aircraft	Unit Flying Days/Year	Baseline Totals		Projected Totals	
		Avg. Busy Day	Annual Operations	Avg. Busy Day	Annual Operations
C-17	240	214.76	51,542	214.76	51,542
KC-135	240	235.70	56,568	235.70	56,568
Transient[b]	240	5.62	1,349	5.62	1,349
KC-46A[c]	240	0	0	172.35	41,364
Total		**456.08**	**109,459**	**628.43**	**150,823**

[a] The numbers presented are operations. An operation is the accomplishment of a single maneuver, such as a takeoff/departure, an arrival/landing, or half of a closed pattern.

[b] The primary transient military aircraft types using Altus AFB include C-130, C-17, C-21, and T-38.

[c] The normal flying hours for Altus AFB are 9:30 A.M. to 2:30 P.M. However, approximately 20 percent of the total KC-46A operations would occur during environmental night (10:00 P.M. to 7:00 A.M.).

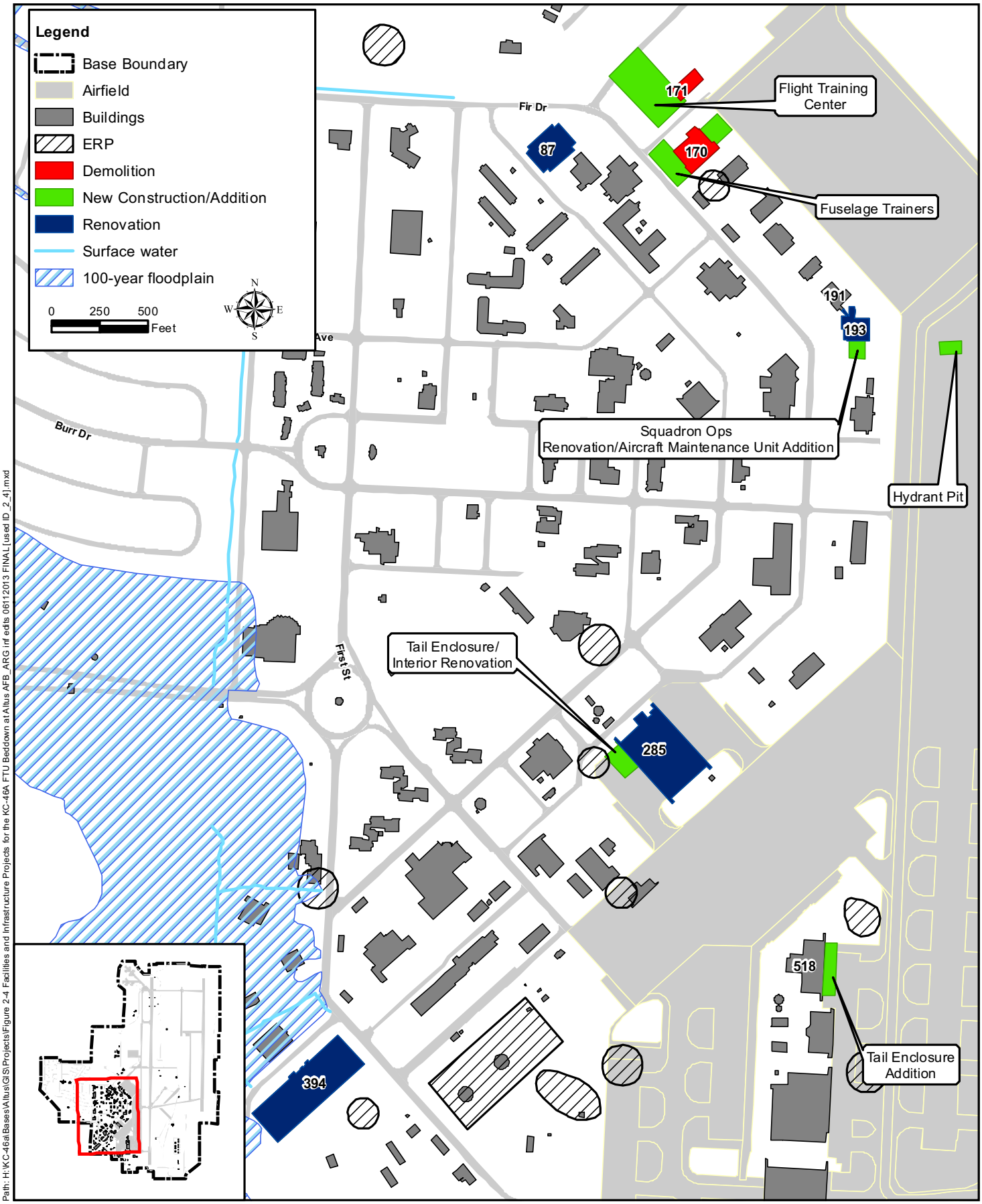

Figure ES-2. Facilities and Infrastructure Projects for the KC-46A FTU Scenario at Altus AFB

ES 2.3.4 Airspace Use and Auxiliary Airfields

KC-46A aircrews associated with the FTU scenario would use the same flight tracks, AR tracks, four auxiliary airfields and, if necessary, the fuel jettison areas currently used by the KC-135 FTU. Auxiliary airfields currently used by Altus AFB include Clinton-Sherman Industrial Airpark (CSM), Lubbock Preston Smith International Airport (LBB), Rick Husband Amarillo International Airport (AMA), and Fort Worth Alliance Airport (AFW).

ES 2.4 ALTUS AFB MOB 1 SCENARIO

In addition to evaluating Altus AFB as the Preferred Alternative for the FTU mission, the USAF is also evaluating Altus AFB as a reasonable alternative for the MOB 1 scenario. This section details the specific actions that would occur if Altus AFB is selected to host the KC-46A MOB 1 scenario. The MOB 1 scenario would be additive to the existing KC-135 and C-17 FTU missions at Altus AFB.

ES 2.4.1 Facilities and Infrastructure Projects

The projects anticipated to be required to support the KC-46A MOB 1 scenario at Altus AFB are presented on Figures ES-3 and ES-4. Table ES-4 summarizes the KC-46A MOB 1-related facility and infrastructure projects by construction category.

Table ES-4. Facilities and Infrastructure Projects for the MOB 1 Scenario at Altus AFB

Project Type	Area (Square Feet)
Demolition	508,776
Renovation	599,758
New Construction	3,449,929
Additions/Alterations	21,900

ES 2.4.2 Personnel Requirements

Implementation of the MOB 1 scenario at Altus AFB would increase the population by approximately 4,917 people, which includes 1,873 full-time military personnel and 3,044 dependents of incoming military personnel only. This number does not include the 29 DoD civilians, 930 part-time Reservists, and 20 contractors associated with the MOB 1 scenario at Altus AFB under the assumption that these individuals would be from the local population and would not represent an in-migration of people to the area.

ES 2.4.3 Flight Operations

Table ES-5 provides a comparison of the existing airfield operations relative to the proposed KC-46A aircraft operations anticipated with implementation of the MOB 1 scenario at Altus AFB. The table shows that the total annual operations at Altus AFB would increase from 109,459 per year to 143,169, resulting in an approximate 31 percent increase in annual aircraft operations.

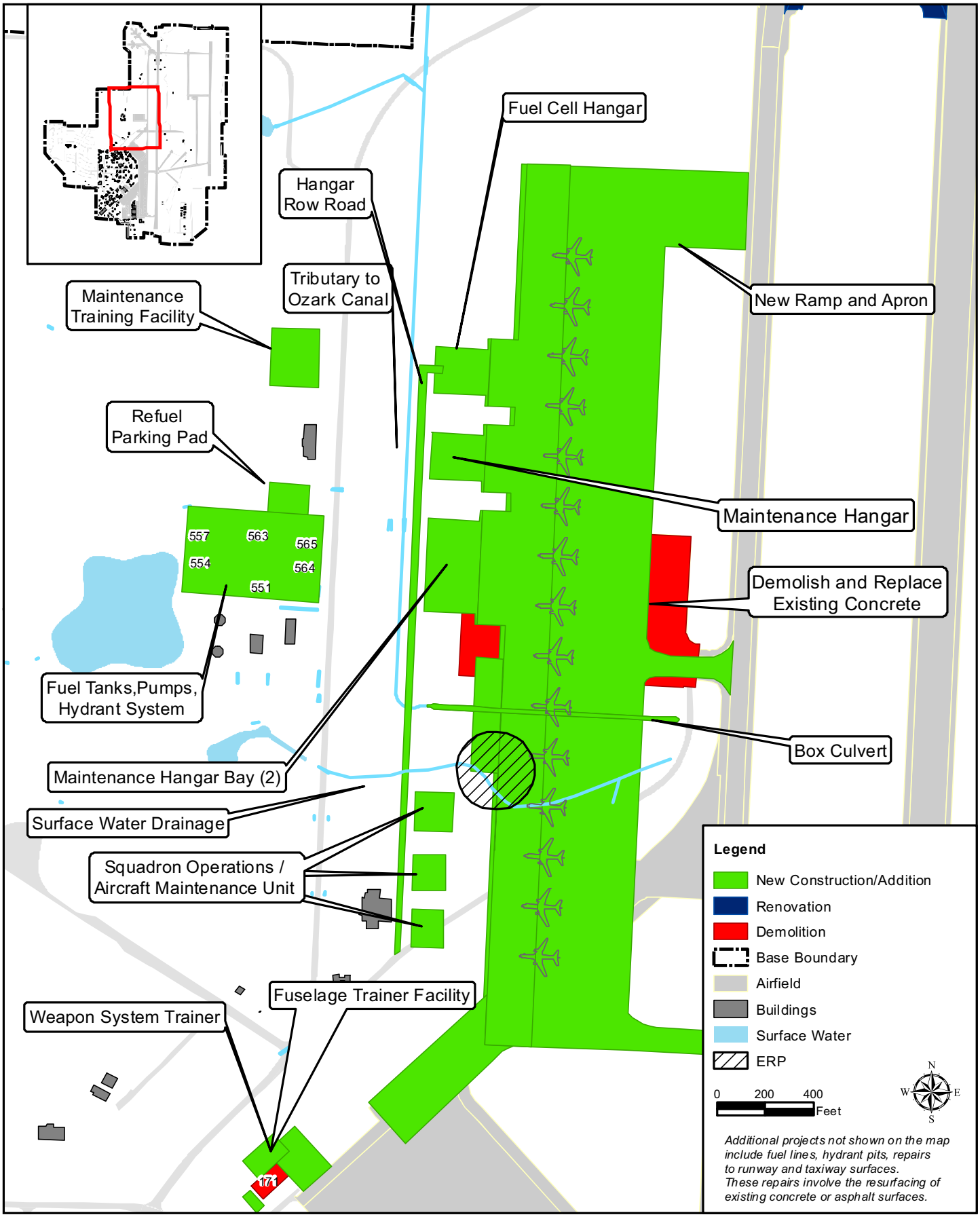

Figure ES-3. Facilities and Infrastructure Projects for the KC-46A MOB 1 Scenario at Altus AFB - Map 1

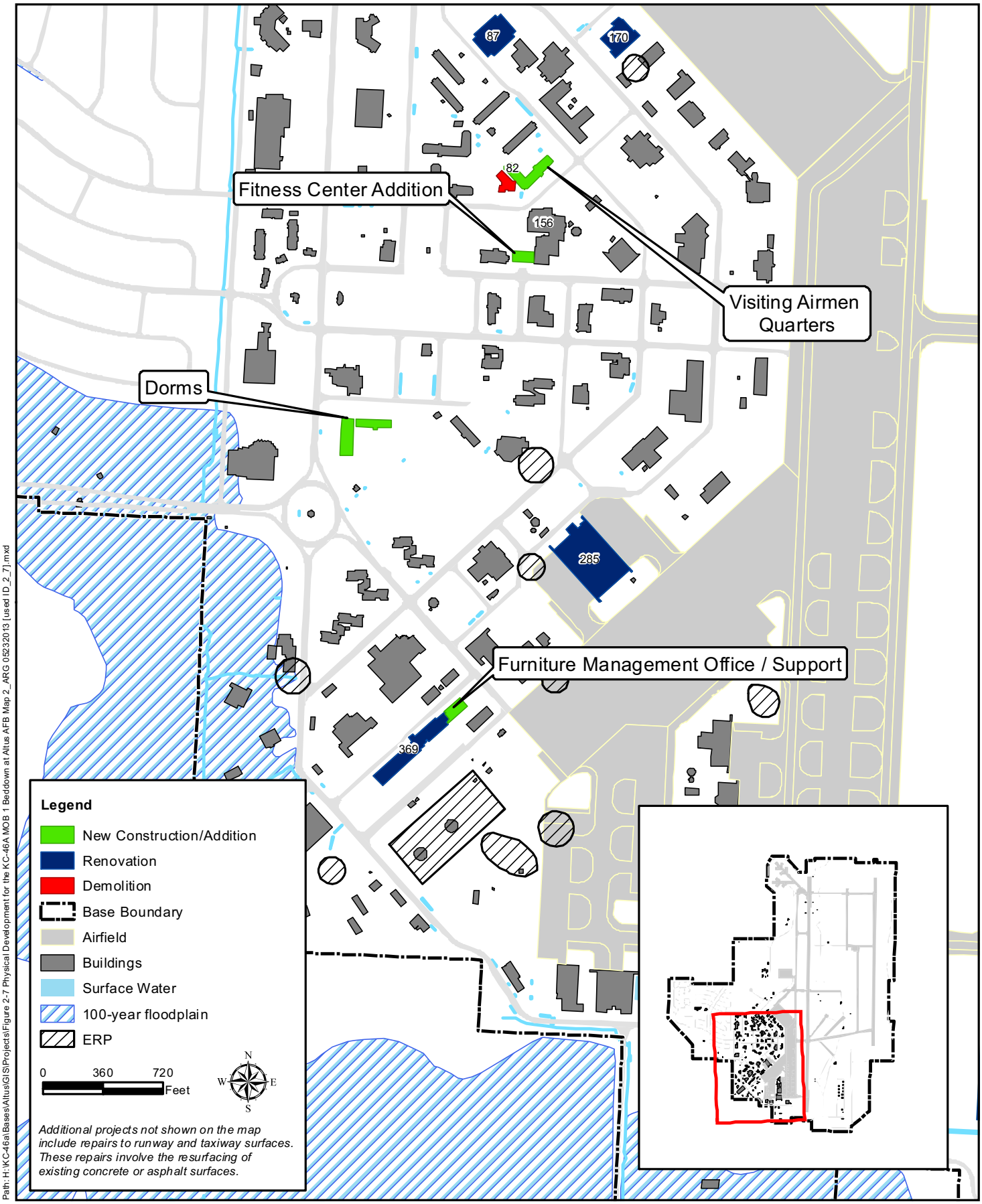

Figure ES-4. Facilities and Infrastructure Projects for the KC-46A MOB 1 Scenario at Altus AFB - Map 2

Table ES-5. Altus AFB Baseline and Projected MOB 1 Scenario End-State Airfield Operations[a]

Aircraft	Unit Flying Days/Year	Baseline Totals		Projected Totals	
		Avg. Busy Day	Annual Operations	Avg. Busy Day	Annual Operations
C-17	240	214.76	51,542	214.76	51,542
KC-135	240	235.70	56,568	235.70	56,568
Transient[b]	240	5.62	1,349	5.62	1,349
KC-46A[c]	312[d]	0	0	107.60	33,710
Total[e]		**456.08**	**109,459**	**563.68**	**143,169**

[a] An operation is the accomplishment of a single maneuver, such as a takeoff/departure, an arrival/landing, or half of a closed pattern. The numbers presented are operations.

[b] The primary transient aircraft types using Altus AFB include C-130, C-17, C-21, and T-38.

[c] Approximately 10 percent of the total KC-46A operations would occur during environmental night (10:00 P.M. to 7:00 A.M.).

[d] The annual total represents a combination of operations resulting from local training sorties, which occur 312 days per year, and mission sorties, which occur 365 days per year. The expected 475 mission sorties per year would not normally conduct closed pattern operations, whereas training sorties would conduct an average of approximately 6 closed patterns per sortie.

[e] The total operations in this table are a combination of all aircraft operations and are based on different numbers of flying days.

ES 2.4.4 Airspace Use

KC-46A aircrews would utilize the existing KC-135 flight tracks, AR tracks, and fuel jettison areas if necessary. No auxiliary airfields are required by the MOB 1 mission.

ES 2.5 FAIRCHILD AFB MOB 1 SCENARIO

The USAF is evaluating Fairchild AFB as a reasonable alternative for the MOB 1 scenario of 36 KC-46A aircraft. The MOB 1 scenario would replace the existing 30 KC-135 aircraft and the associated aerial refueling mission at Fairchild AFB and would result in a net increase of six aircraft.

The Survival, Evasion, Resistance, and Escape School, Joint Personnel Recovery Agency, and Weapons Instructor Course (WIC) missions would continue at Fairchild AFB. However, the KC-135 WIC function would temporarily move from Building 2040 to Building 399. The WIC function comprises 23 military instructor/administrative personnel and a student throughput of 16 students per year. This function is responsible for 76 airfield annual sorties at Fairchild AFB and could continue regardless of the final KC-46A MOB 1 basing decision.

ES 2.5.1 Facilities and Infrastructure Projects

The projects anticipated to be required to support the KC-46A MOB 1 scenario at Fairchild AFB are presented on Figure ES-5. Table ES-6 summarizes the KC-46A MOB 1-related projects by construction category. The proposed apron and fuels upgrade project would be developed on areas of the flightline that are currently paved and unpaved.

Table ES-6. Facilities and Infrastructure Projects for the MOB 1 Scenario at Fairchild AFB

Project Type	Area (Square Feet)
Demolition	188,309
Renovation	2,068,316
New Construction	1,613,597
Additions/Alterations	32,500

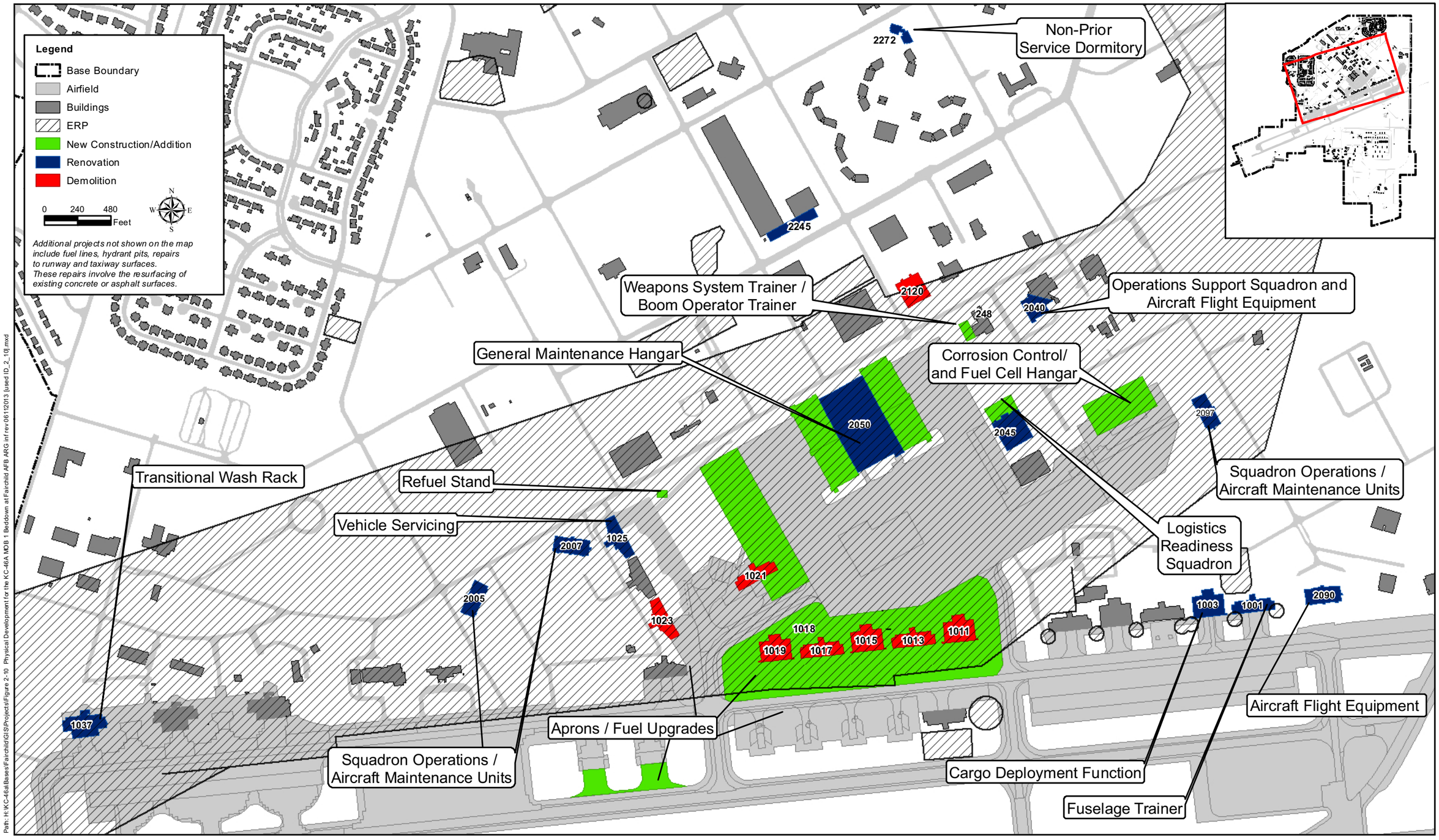

Figure ES-5. Facilities and Infrastructure Projects for the KC-46A MOB 1 Scenario at Fairchild AFB

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ES 2.5.2 Personnel Requirements

Implementation of the MOB 1 scenario at Fairchild AFB would increase the population by approximately 1,095 people, which includes 417 full-time military personnel and 678 dependents of incoming military personnel only. This number does not include the 1 DoD civilian, 35 part-time Guardsmen, and 20 contractors associated with the MOB 1 scenario at Fairchild AFB under the assumption that these individuals would be from the local population and would not represent an in-migration of people to the area.

ES 2.5.3 Flight Operations

Table ES-7 provides a comparison of the existing airfield operations relative to the proposed KC-46A operations anticipated with implementation of the MOB 1 scenario at Fairchild AFB to the existing baseline conditions. The table shows that the total annual operations at Fairchild AFB would increase from 30,507 per year to 49,303, resulting in an approximate 62 percent increase in annual aircraft operations.

Table ES-7. Fairchild AFB Baseline and Projected MOB 1 Scenario End-State Airfield Operations[a]

Aircraft	Unit Flying Days/Year	Baseline Totals		Projected Totals	
		Avg. Busy Day	Annual Operations	Avg. Busy Day	Annual Operations
KC-135[e]	260	57.36	14,914	0	0
UH-60	260	15.55	4,043	15.55	4,043
UH-1N	260	19.97	5,192	19.97	5,192
Transient[b]	365	17.42	6,358	17.42	6,358
KC-46A	312[c]	0	0	107.60	33,710
Total[d]		**110.30**	**30,507**	**160.54**	**49,303**

[a] An operation is the accomplishment of a single maneuver, such as a takeoff/departure, an arrival/landing, or half of a closed pattern. The numbers presented are operations.

[b] The primary transient aircraft types using Fairchild AFB include C-12, C-130, C-17, C-9, EA-6B, F-16, F-18A/C, KC-135, and P-3C. There is also some use of Fairchild AFB by helicopters and piston aircraft (types unidentified).

[c] The annual total represents a combination of operations resulting from local training sorties, which occur 312 days per year, and mission sorties, which occur 365 days per year. The expected 475 mission sorties per year would not normally conduct closed pattern operations, whereas training sorties would conduct an average of approximately 6 closed patterns per sortie.

[d] The total operations in this table are a combination of all aircraft operations and are based on different numbers of flying days.

[e] A minor number of KC-135 sorties associated with the WIC could continue with the implementation of the MOB 1 scenario.

ES 2.5.4 Airspace Use

KC-46A aircrews would utilize the existing KC-135 flight tracks, AR tracks, and fuel jettison areas if necessary. However, the MOB 1 mission would not require the use of auxiliary airfields.

ES 2.6 GRAND FORKS AFB MOB 1 SCENARIO

The USAF is evaluating Grand Forks AFB as a reasonable alternative for the MOB 1 scenario of 36 KC-46A aircraft. The KC-46A MOB 1 scenario would be additive to the three existing remotely piloted aircraft (RPA) missions at Grand Forks AFB.

ES 2.6.1 Facilities and Infrastructure Projects

The projects anticipated to be required to support the KC-46A MOB 1 scenario at Grand Forks AFB are presented on Figure ES-6. Table ES-8 summarizes the KC-46A MOB 1-related projects by

construction category. Existing RPA missions would need to continue during demolition and reconstruction activities. A construction transition plan would be implemented, where the taxiway demolition and construction would be phased so as not to interfere with existing airfield operations.

Table ES-8. Facilities and Infrastructure Projects for the MOB 1 Scenario at Grand Forks AFB

Project Type	Area (Square Feet)
Demolition	9,837
Renovation	20,358,431
New Construction	952,275
Additions/Alterations	403,619

ES 2.6.2 Personnel Requirements

Implementation of the MOB 1 scenario at Grand Forks AFB would increase the population by approximately 4,526 people, which includes 1,724 full-time military personnel and 2,802 dependents of incoming military personnel only. This number does not include the 3 DoD civilians, 659 part-time Guardsmen, and 20 contractors associated with the MOB 1 scenario at Grand Forks AFB under the assumption that these individuals would be from the local population and would not represent an in-migration of people to the area.

ES 2.6.3 Flight Operations

Table ES-9 provides a comparison of the existing airfield operations relative to the proposed KC-46A aircraft operations anticipated with implementation of the MOB 1 scenario at Grand Forks AFB. The table shows that the total annual operations at Grand Forks AFB would increase from 14,946 per year to 48,656, resulting in an approximate 226 percent increase in annual aircraft operations.

Table ES-9. Grand Forks AFB Baseline and Projected MOB 1 Scenario End-State Airfield Operations[a]

Aircraft	Unit Flying Days/Year	Baseline Totals		Projected Totals	
		Avg. Busy Day	Annual Operations	Avg. Busy Day	Annual Operations
RPAs	130-260	70.00	14,690	70.00	14,690
Transient[b]	365	0.70	256	0.70	256
KC-46A	312[c]	0	0	107.60	33,710
Total[d]		**70.70**	**14,946**	**178.30**	**48,656**

[a] An operation is the accomplishment of a single maneuver, such as a takeoff/departure, an arrival/landing, or half of a closed pattern. The numbers presented are operations.

[b] The primary transient military aircraft types using Grand Forks AFB include KC-135, C-20, C-21, C-130, KC-10, and C-12.

[c] The annual total represents a combination of operations resulting from local training sorties, which occur 312 days per year, and mission sorties, which occur 365 days per year. The expected 475 mission sorties per year would not normally conduct closed pattern operations, whereas training sorties would conduct an average of approximately 6 closed patterns per sortie.

[d] The total operations in this table are a combination of all aircraft operations and are based on different numbers of flying days.

ES 2.6.4 Airspace Use

KC-46A aircrews would utilize former KC-135 flight tracks, AR tracks, and fuel jettison areas if necessary. No auxiliary airfields are required by the MOB 1 mission.

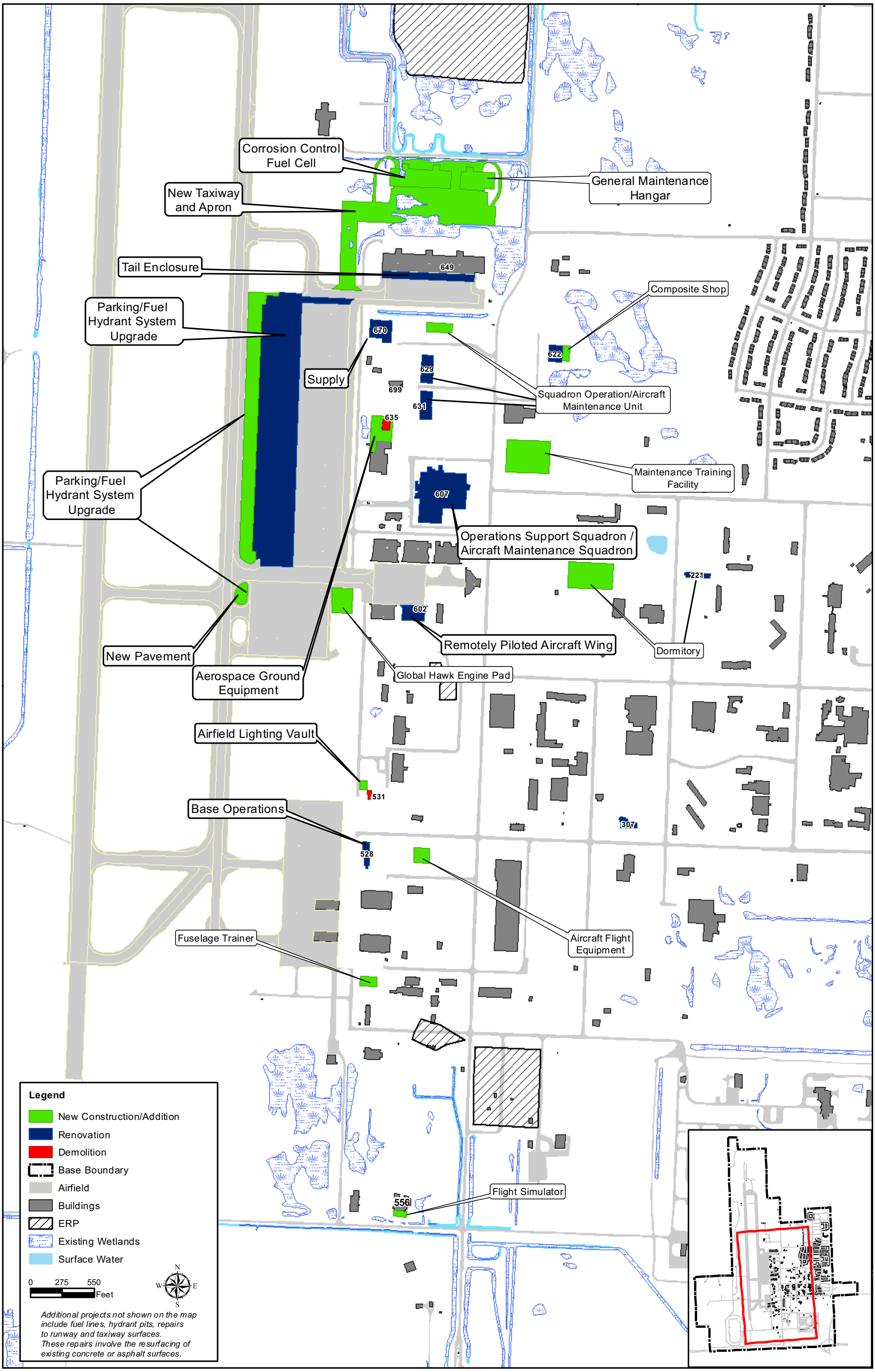

Figure ES-6. Facilities and Infrastructure Projects for the KC-46A MOB 1 Scenario at Grand Forks AFB

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ES 2.7 McCONNELL AFB FTU SCENARIO

The USAF is evaluating McConnell AFB as an alternative for the FTU scenario of up to eight KC-46A aircraft, four of which are scheduled to arrive in 2016. The KC-46A FTU scenario would be additive to the existing KC-135 mission at McConnell AFB.

ES 2.7.1 Facilities and Infrastructure Projects

Table ES-10 summarizes the KC-46A FTU-related projects by construction category. Figure ES-7 presents the proposed locations for the FTU-related projects on McConnell AFB. Existing flight operations and refueling activities associated with the KC-135 mission would need to continue during demolition and reconstruction activities.

Table ES-10. Facilities and Infrastructure Projects for the FTU Scenario at McConnell AFB

Project Type	Area (Square Feet)
Demolition	35,646
Renovation	152,686
New Construction	242,668
Additions/Alterations	58,960

ES 2.7.2 Personnel Requirements

Implementation of the FTU scenario at McConnell AFB would increase the population by approximately 570 people, which includes the 141 full-time military personnel, 229 dependents of incoming military personnel only, and 200 students. This number does not include the 315 DoD civilians, 20 part-time Reservists, and 23 contractors associated with the FTU scenario at McConnell AFB under the assumption that these individuals would be from the local population and would not represent an in-migration of people to the area.

ES 2.7.3 Flight Operations

Table ES-11 provides a comparison of the existing airfield operations relative to the proposed KC-46A aircraft operations anticipated with implementation of the KC-46A FTU scenario at McConnell AFB. The table shows that the total annual operations at McConnell AFB would increase from 38,618 per year to 79,982, resulting in an approximate 107 percent increase in annual aircraft operations.

Table ES-11. McConnell AFB Baseline and Projected FTU Scenario End-State Airfield Operations[a]

Aircraft	Unit Flying Days/Year	Baseline Totals		Projected Totals	
		Avg. Busy Day	Annual Operations	Avg. Busy Day	Annual Operations
KC-135	260	94.31	24,521	94.31	24,521
Transient[b]	260	43.66	11,352	43.66	11,352
Civilian[c]	365	7.52	2,744	7.52	2,744
KC-46A	240	0	0	172.35	41,364
Total		**145.49**	**38,618**	**317.84**	**79,982**

[a] The numbers presented are operations. An operation is the accomplishment of a single maneuver such as a takeoff/departure, an arrival/landing, or half of a closed pattern.

[b] The primary transient military aircraft types using McConnell AFB include KC-135, F-16, T-1, and T-38 (McConnell AFB 2011).

[c] Because the Boeing Corporation and Cessna Corporation manufacturing facilities are adjacent to McConnell AFB, Boeing and Cessna aircraft compose the civilian aircraft that use McConnell AFB. The primary transient civilian aircraft types are Boeing 747 and 767 and Cessna 441.

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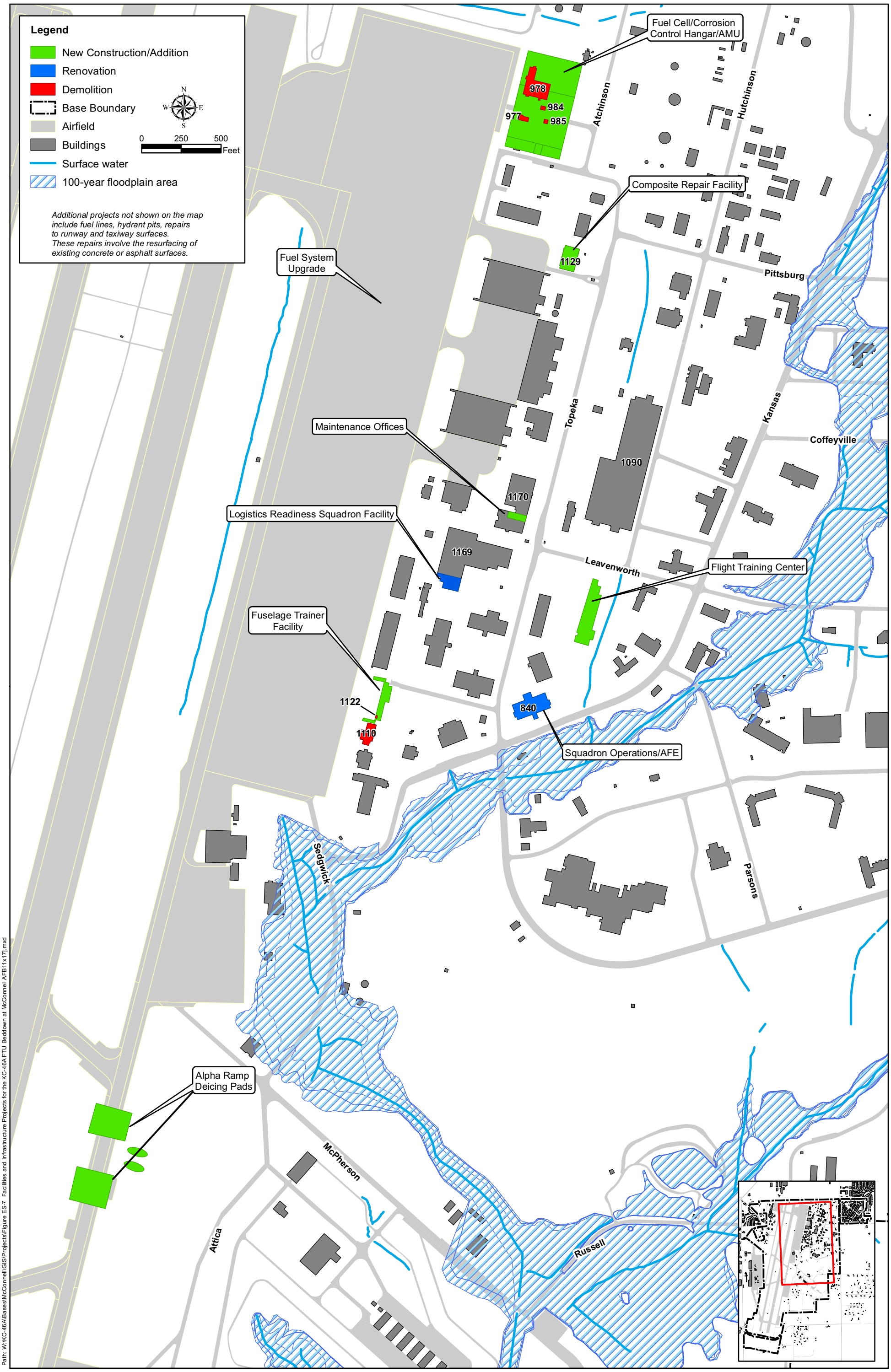

Figure ES-7. Facilities and Infrastructure Projects for the KC-46A FTU Scenario at McConnell AFB

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ES 2.7.4 Airspace Use and Auxiliary Airfields

KC-46A aircrews associated with the FTU scenario would use the same AR tracks and, if necessary, fuel jettison areas as the current KC-135 mission. As part of the FTU scenario at McConnell AFB, KC-46A aircraft would use auxiliary airfields at CSM, Forbes Field (FOE), and Wichita Mid-Continent Airport (ICT) airfields. KC-46A aircrews associated with the FTU scenario would fly a combined estimate of 6,516 annual aircraft operations at the auxiliary airfields. There are currently 28,485 annual airfield operations at CSM, 24,742 annual airfield operations at FOE, and 165,035 annual airfield operations at ICT.

ES 2.8 McCONNELL AFB MOB 1 SCENARIO PREFERRED ALTERNATIVE

In addition to evaluating McConnell AFB for the FTU scenario, the USAF has selected McConnell AFB as the Preferred Alternative for the KC-46A MOB 1 scenario. Implementation of the MOB 1 scenario at McConnell AFB would replace the existing 44 KC-135 aircraft with 36 Primary Aerospace Vehicles Authorized KC-46A aircraft.

ES 2.8.1 Facilities and Infrastructure Projects

Table ES-12 summarizes the KC-46A MOB 1-related projects by construction category. These projects are displayed on Figure ES-8. Existing flight operations and refueling activities associated with the KC-135 mission would need to continue during demolition and reconstruction activities therefore, a construction transition plan would be implemented.

Table ES-12. Facilities and Infrastructure Projects for the MOB 1 Scenario at McConnell AFB

Project Type	Area (Square Feet)
Demolition	144,461
Renovation	178,648
New Construction	418,496
Additions/Alterations	85,400

ES 2.8.2 Personnel Requirements

The KC-46A MOB 1 mission at McConnell AFB would eventually replace the existing KC-135 mission; therefore, there would be an overall population decrease of 291 people, which includes 111 full-time military personnel and 180 dependents of incoming military personnel only. This number does not include the overall increase of 427 part-time Reservists, 14 DoD civilians, and 20 contractors associated with the MOB 1 scenario at McConnell AFB under the assumption that these individuals would be from the local population and would not represent an in-migration of people to the area.

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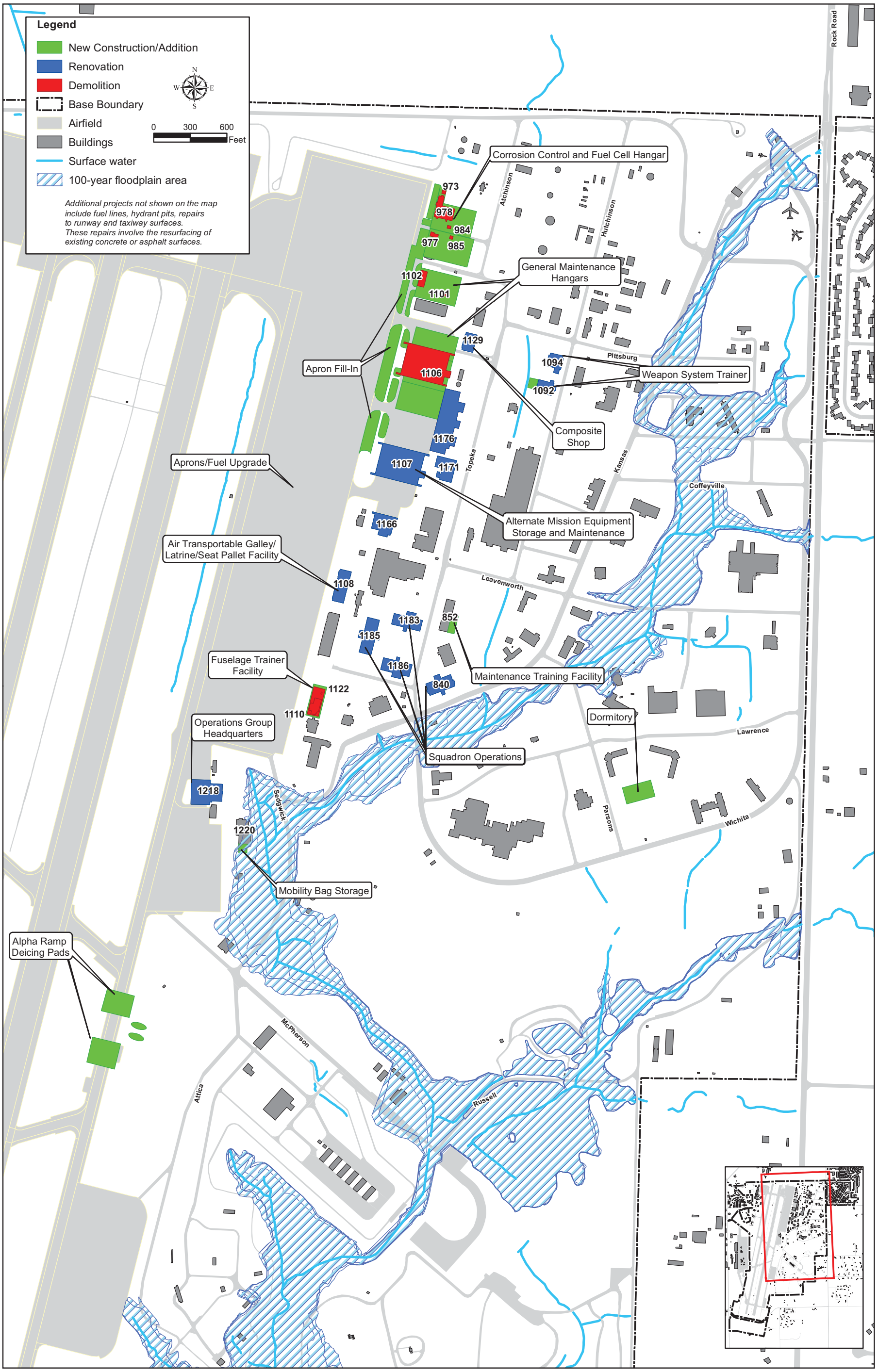

Path: W:\KC-46A\Bases\McConnell\GIS\Projects\Figure ES-8 Facilities and Infrastructure Projects for the KC-46A MOB 1 Beddown at McConnell AFB ARG 0109201 BT 11x17.mxd

Figure ES-8. Facilities and Infrastructure Projects for the KC-46A MOB 1 Scenario at McConnell AFB

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ES 2.8.3 Flight Operations

Table ES-13 provides a comparison of the existing airfield operations relative to the proposed KC-46A aircraft operations anticipated with implementation of the MOB 1 scenario at McConnell AFB. The table shows that the total annual operations would increase from 38,618 per year to 47,807, resulting in an approximate 24 percent increase in annual aircraft operations.

Table ES-13. McConnell AFB Baseline and Projected MOB 1 Scenario End-State Airfield Operations[a]

Aircraft	Unit Flying Days/Year	Baseline Totals		Projected Totals	
		Avg. Busy Day	Annual Operations	Avg. Busy Day	Annual Operations
KC-135	260	94.31	24,521	0	0
Transient[b]	260	43.66	11,352	43.66	11,352
Civilian[c]	365	7.52	2,745	7.52	2,745
KC-46A	312[d]	0	0	107.60	33,710
Total[e]		**145.49**	**38,618**	**158.78**	**47,807**

[a] An operation is the accomplishment of a single maneuver, such as a takeoff/departure, an arrival/landing, or half of a closed pattern. The numbers presented are operations.

[b] The primary transient military aircraft types using McConnell AFB include KC-135, F-16, T-1, and T-38 (McConnell AFB 2011).

[c] Because the Boeing Corporation and Cessna Corporation manufacturing facilities are adjacent to McConnell AFB, Boeing and Cessna aircraft compose the civilian aircraft that use McConnell AFB. The primary transient civilian aircraft types are Boeing 747 and 767 and Cessna 441.

[d] The annual total represents a combination of operations resulting from local training sorties, which occur 312 days per year, and mission sorties, which occur 365 days per year. The expected 475 mission sorties per year would not normally conduct closed pattern operations, whereas training sorties would conduct an average of approximately 6 closed patterns per sortie.

[e] The total operations in this table are a combination of all aircraft operations and are based on different numbers of flying days.

ES 2.8.4 Airspace Use

KC-46A aircrews would utilize the existing KC-135 flight tracks, AR tracks, and fuel jettison areas if necessary. No auxiliary airfields are required by the MOB 1 mission.

ES 2.9 NO ACTION ALTERNATIVE

Analysis of the No Action Alternative provides a benchmark, enabling decision makers to compare the magnitude of the environmental effects of the proposed action or alternatives. Section 1502.14(d) of the National Environmental Policy Act (NEPA) requires an EIS to analyze the No Action Alternative. The No Action Alternative for this EIS means that the KC-46A beddown would not occur at any base at this time. The No Action Alternative would not establish the KC-46A FTU and associated aircraft and it would not establish the KC-46A MOB 1 and associated aircraft. There would be no change in base aircraft or personnel assigned to the KC-135 aircraft squadrons. No KC-46A aircraft would arrive, and all existing aircraft would remain in place. No KC-46A personnel changes or construction, renovation, or demolition activities would occur.

The No Action Alternative has been carried forward in the EIS per CEQ regulations and as a baseline of existing impact continued into the future against which to compare impacts of the action alternatives.

Evaluation of the No Action Alternative compares the effects of implementing the KC-46A FTU and MOB 1 scenarios with the effects of the No Action Alternative at each base and for each resource area.

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ES 3.0 BASE-AFFECTED ENVIRONMENT

The base-affected environment for each resource area at each base is not included in this ES. Please refer to Chapter 3, Sections 3.1 through 3.4 of the Final EIS, for the base-affected environment at each of the four bases.

ES 4.0 ENVIRONMENTAL CONSEQUENCES

This section summarizes the potential environmental consequences at each base as presented in Chapter 4 of the Final EIS. The nature of the impact is determined by the conditions of the environment existing before implementation of any of the scenarios (i.e., baseline conditions and the No Action Alternative). The geographic scope of potential consequences, known as an ROI, is defined as the area of the base affected by aircraft operations and infrastructure upgrades. For some resources (such as noise, air quality, and socioeconomics), the ROI extends into surrounding communities unique to that specific resource area. The ROI for the FTU scenario also includes areas associated with the auxiliary airfields.

ES 4.1 ALTUS AFB (FTU OR MOB 1 SCENARIO)

ES 4.1.1 Noise

The current mission at Altus AFB includes the operation of both C-17 and KC-135 aircraft. Noise levels near Altus AFB were calculated for baseline conditions, and the FTU and MOB 1 scenarios at Altus AFB.

ES 4.1.1.1 FTU Scenario Noise Consequences

An additional 584 off-base acres and an estimated 17 additional off-base residents would be affected by noise levels greater than 65 decibels (dB) day-night average sound level (DNL). Noise levels greater than 80 dB DNL would affect an additional 7 off-base acres, but U.S. Census Bureau data and aerial photography indicate no residences exist in the affected area.

Several representative locations surrounding Altus AFB were analyzed for noise conditions, as shown on Figure ES-9. Eight of the 16 locations currently experience noise levels greater than 65 dB DNL. Noise levels would change by 1 dB DNL or less under the FTU scenario. The top five sound exposure level (SEL) ranges were estimated for each of the representative locations.

The changes in SEL ranges as compared to baseline were minor in some locations and non-existent in others. Ongoing C-17 closed pattern operations and transient T-38 closed pattern operations aircraft overflights are louder than would be the proposed KC-46A overflights.

At 3 of the 4 auxiliary airfields (AMA, AFW, LBB), the proposed KC-46A activity would not be expected to have any noticeable effect on noise levels.

Noise would also be generated by construction and demolition (C&D) activities in support of the proposed beddown. These activities would occur in the context of an active AFB where aircraft and other types of noise are a normal part of the environment. Construction noise would be minimized in accordance with local regulations and would be temporary and intermittent, lasting only the duration of the project. Some people living or working near the construction sites may notice and be annoyed by the noise, but noise impacts would not be substantial enough to be considered significant.

ES 4.1.1.2 MOB 1 Scenario Noise Consequences

An additional 155 off-base acres and an estimated 6 additional off-base residents would be affected by noise levels greater than 65 dB DNL (Figure ES-10). Noise levels greater than 80 dB DNL

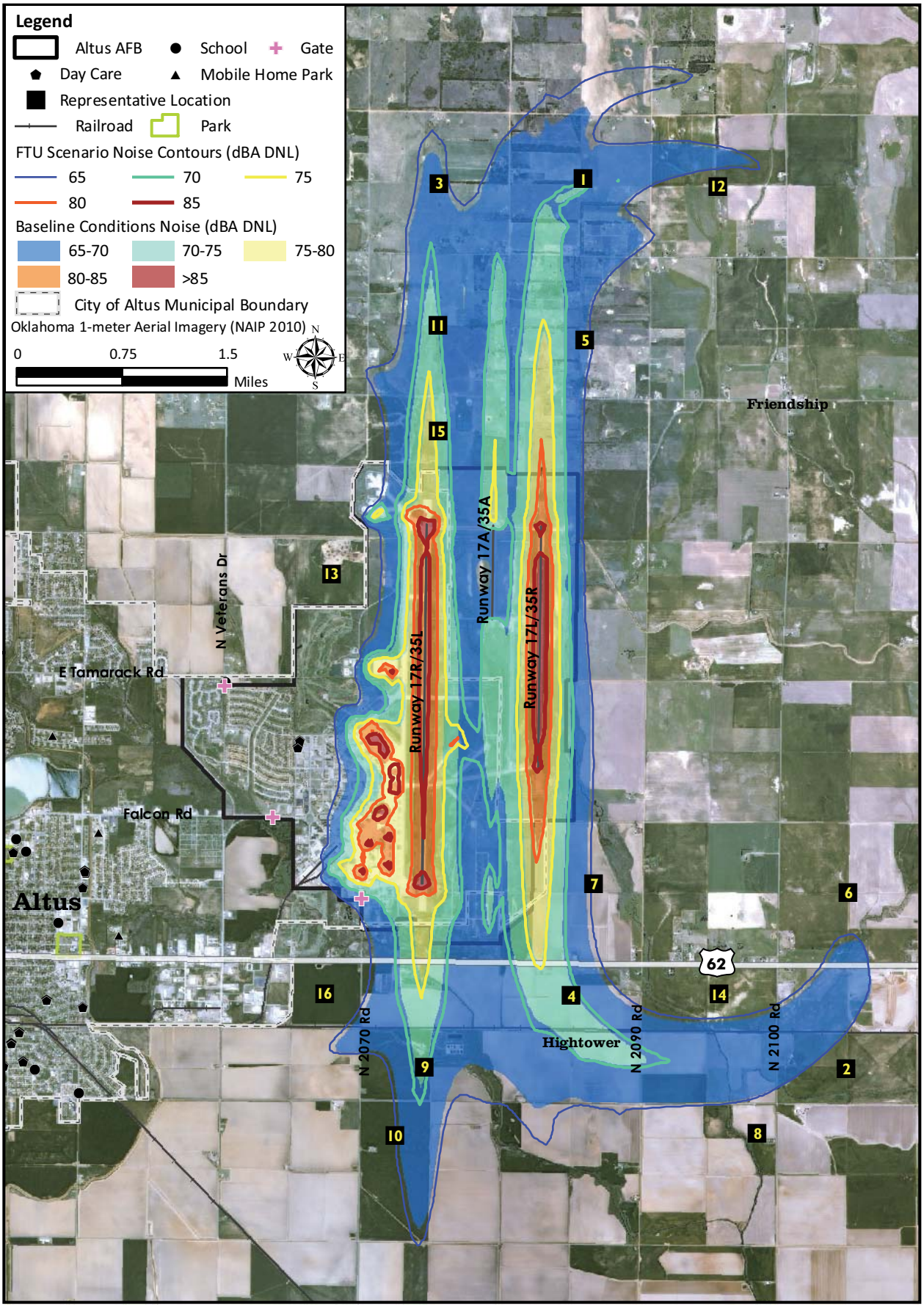

Figure ES-9. KC-46A FTU Scenario and Baseline Noise Contours at Altus AFB

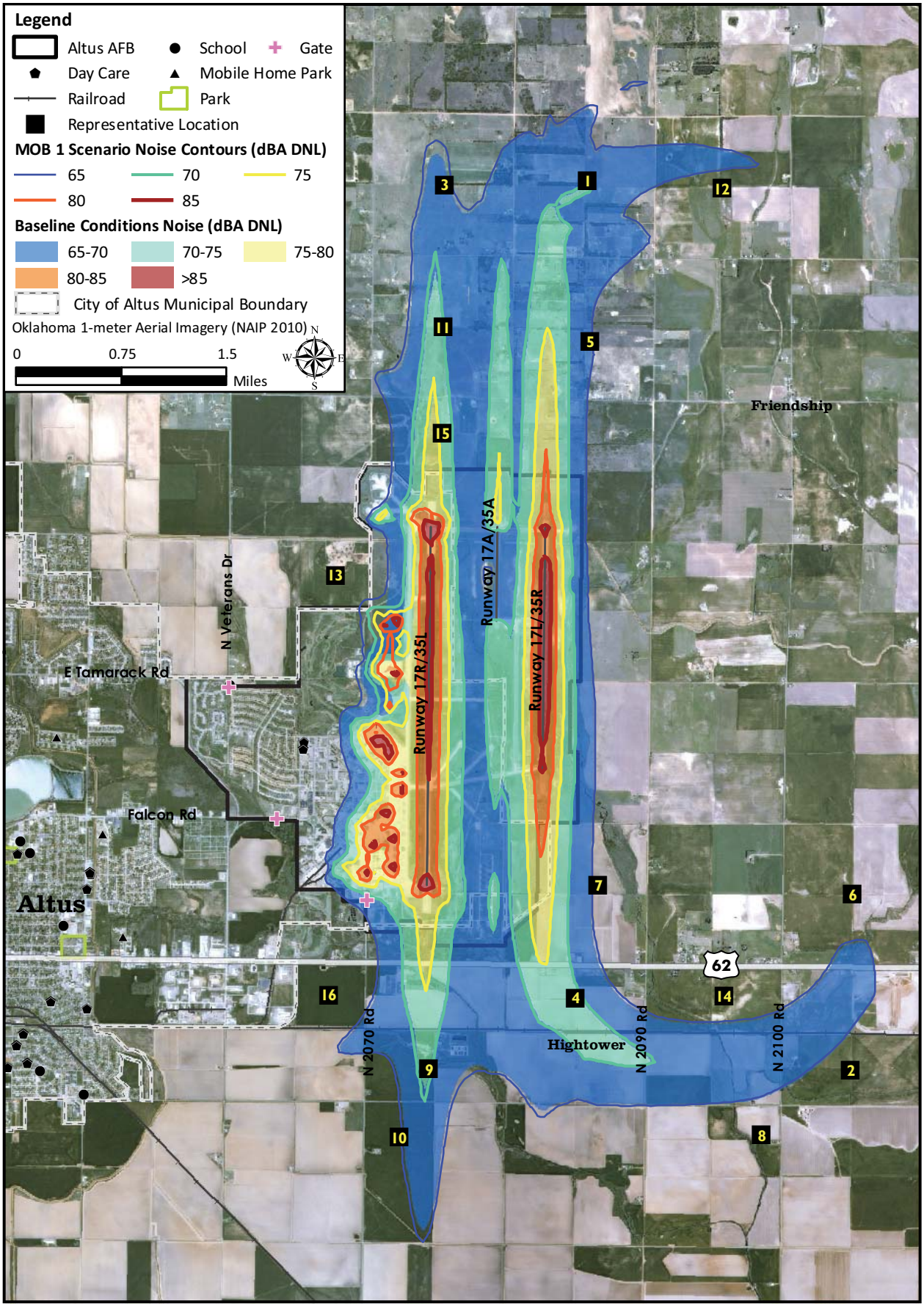

Figure ES-10. KC-46A MOB 1 Scenario and Baseline Noise Contours at Altus AFB

would affect an additional 3 off-base acres, but interpretation of aerial photography and U.S. Census Bureau data indicate no residents in the affected area. DNL would increase by 1 dB or less at representative locations around Altus AFB, and the range of SELs of the loudest five overflights would remain unchanged under the MOB 1 scenario. Construction noise would be similar or slightly higher than that described for the FTU scenario. Due to the temporary and intermittent nature of C&D and its associated noise level, noise impacts would not be substantial enough to be considered significant.

ES 4.1.2 Air Quality

The National Ambient Air Quality Standards (NAAQS) used to regulate air quality for six pollutants and the impact threshold values for the air quality analysis are described in Final EIS Volume II, Appendix B, Section B.2.

The project region within Jackson County and the areas surrounding the CSM, LBB, and AMA auxiliary airfields attain all of the NAAQS. The area surrounding auxiliary airfield AFW attains all of the NAAQS, except that it is in serious nonattainment of the ozone (O_3) NAAQS.

ES 4.1.2.1 FTU Scenario Air Quality Consequences

An estimate of emissions from construction activities that would occur under the FTU scenario shows that, for each year of construction, total emissions would remain well below the U.S. Environmental Protection Agency (USEPA) Prevention of Significant Deterioration (PSD) thresholds used to indicate significance and would produce less than significant air quality impacts. The net increase in annual operational emissions from the FTU scenario would remain below all PSD thresholds except for nitrogen oxide (NO_x) emissions (see Table 4-5 in the Final EIS). The majority of proposed NO_x emissions generated would result from operations up to an altitude of 3,000 feet above ground level (AGL) and across several square miles and would be adequately dispersed to the point that they would likely not result in substantial ground-level impacts in a localized area. Therefore, KC-46A operations associated with the FTU scenario at Altus AFB would produce less than significant air quality impacts.

The annual emissions that would result from KC-46A operations proposed at each auxiliary airfield associated with the FTU scenario at Altus AFB show that the proposed increase in emissions at CSM, LBB, and AMA would not exceed a PSD threshold (see Table 4-6 in the Final EIS). The increase in proposed emissions at AFW would not exceed any applicable PSD or conformity threshold. Therefore, KC-46A operations at all four auxiliary airfields associated with the FTU scenario would produce less than significant air quality impacts and a general conformity *de minimis* determination may be made for the projected increases in NO_x and volatile organic compound (VOC) emissions at AFW.

ES 4.1.2.2 MOB 1 Scenario Air Quality Consequences

The estimates of emissions from construction activities that would occur under the MOB 1 scenario at Altus AFB show that, for each year of construction, total emissions would remain below the PSD thresholds (see Table 4-7 in the Final EIS).

The net increase in annual operational emissions from the MOB 1 scenario would remain below all PSD thresholds except for carbon monoxide (CO) and NO_x emissions (see Table 4-8 in the Final EIS). The majority of proposed CO and NO_x emissions generated by the MOB 1 scenario would result from aircraft operations up to an altitude of 3,000 feet AGL and across several square miles and would be adequately dispersed to the point that they would likely not result in

substantial ground-level impacts in a localized area. Jackson County generates relatively low levels of CO and NO_x emissions and it is in attainment of all NAAQS by wide margins. Therefore, operations resulting from the MOB 1 scenario at Altus AFB would produce less than significant air quality impacts.

ES 4.1.3 Safety

Implementation of the KC-46A FTU or MOB 1 scenario at Altus AFB is not anticipated to result in any net increase in the safety risks associated with aircraft mishaps or any increase in the risks of occurrence of those mishaps. The addition of KC-46A aircraft under both scenarios would result in an increase in airfield operations and accident potential over those generated by existing KC-135s and C-17s at Altus AFB. Using the accident rate of 0.36 per flight cycle, it is projected that the probability of a KC-46A accident in the vicinity of the airfield would be low (less than one every 100 years) for either scenario. The overall potential for bird/wildlife-aircraft strikes is not anticipated to be significantly greater than current levels. Similar to the KC-135 aircraft that currently operate at Altus AFB, the KC-46A would have the capability to jettison fuel during non-routine or emergency situations only. Fuel jettison is explained in Final EIS Volume II, Appendix B, Section B.3.3.1.

The USAF does not anticipate any significant safety impacts as a result of construction, demolition, or renovation as all applicable Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) and U.S. Occupational Safety and Health Administration (OSHA) requirements will be implemented.

ES 4.1.4 Soils and Water

All of the C&D activities associated with the proposed KC-46A MOB 1 scenario would occur within the Altus AFB boundary. The total disturbed area for the projects associated with the FTU scenario would not exceed 5 acres (new construction and additions/alterations). The total disturbed area for projects associated with the MOB 1 scenario would not exceed 80 acres (new construction and additions/alterations).

No sensitive groundwater resources, surface water resources, or floodplains are known to occur in areas planned for the KC-46A development projects. Implementation of the MOB 1 scenario would potentially impact a tributary to the Bureau of Reclamation's Ozark Canal and the project design would be coordinated with this agency.

ES 4.1.5 Biological Resources

There are no federally or state-listed species and/or designated critical habitat at Altus AFB. There would be no significant impacts on special-status species resulting from the FTU or MOB 1 scenario at Altus AFB. There would be no significant impacts on wildlife resulting from the FTU or MOB 1 scenario at Altus AFB. The proposed FTU or MOB 1 scenario would not be expected to have any impact on wetlands at the base.

ES 4.1.6 Cultural Resources

Actions associated with the proposed KC-46A FTU scenario include addition/alteration of Building 285, a hangar, which was determined eligible for listing on the National Register of Historic Places (NRHP) by Altus AFB (97 AMW 2013). An addition to Building 285 is proposed as part of the FTU scenario. As part of the MOB 1 scenario, this same building would be renovated. No other buildings or facilities associated with the proposal have been determined

eligible for listing on the NRHP. The Oklahoma State Historic Preservation Office (SHPO) concurs with the USAF's Finding of No Adverse Effect on historic properties (see Final EIS Volume II, Appendix A, Section A.4), concluding the Section 106 consultation process.

No impacts on archaeological historic properties are anticipated to result from implementing the FTU or the MOB 1 scenario. No adverse Section 106 impacts to tribal resources are anticipated. Consultation with 10 tribes resulted in no disagreement with the USAF finding of no adverse impact. Section 106 consultation for the KC-46A FTU and MOB 1 beddown proposed alternatives at Altus AFB is now complete.

No modifications to buildings or ground-disturbing activities are anticipated as part of the FTU scenario at the auxiliary airfields.

ES 4.1.7 Land Use

All of the development proposed as part of either the FTU or MOB 1 scenario would be completed in appropriate land use areas on base. The proposed construction, demolition, and renovation for the FTU and the MOB 1 scenarios would occur in the developed areas of the base, and generally aligns with the desired layout and organization of land use described in the base's 2003 General Plan (GP) (Altus AFB 2003). No adverse impacts to land use are expected from implementation of the FTU or MOB 1 scenarios.

ES 4.1.8 Infrastructure

Water supply for average daily demand is reported to be sufficient to meet future FTU or MOB 1 mission requirements. At peak demand, there is sufficient water supply for the FTU scenario, but for the MOB 1 scenario, the contracted supply of 1.03 million gallons per day will be fully utilized. The base water system capacity is reported to be sufficient to meet future FTU or MOB 1 mission requirements.

No significant adverse impacts are anticipated on the remaining infrastructure and utility systems to meet future FTU or MOB 1 mission requirements. For the FTU scenario, application of the DoD diversion rate would result in approximately 1,937 tons of the total 3,228 tons of potential C&D debris being diverted for reuse or recycling, while the MOB 1 scenario would divert 29,417 tons of the total 49,028 tons of potential C&D debris (USEPA 2009). The remaining C&D debris would go to local permitted landfill(s).

Congestion in the on-base road network during construction activities for the FTU or MOB 1 scenario or as part of the MOB 1 scenario's personnel increase would increase gate traffic and on-base traffic circulation. Regional access roads and the on-base road network have adequate capacity to absorb the additional traffic without major impacts on traffic flow, circulation, or level of service.

ES 4.1.9 Hazardous Materials and Waste

No new hazardous materials would be added that exceed Altus AFB's current hazardous waste processes. It is anticipated that the type and amount of hazardous waste generated would be comparable to or less than the KC-135 mission (Boeing 2013). The USAF would actively pursue efforts to minimize or eliminate the use of various materials, including hexavalent chromium, cadmium, and halon.

Prior to initiating any of the demolition, renovation, and addition/alteration projects, buildings would be evaluated for the presence or absence of asbestos and lead-based paint (LBP).

ES 4.1.10 Socioeconomics

Implementation of the FTU scenario at Altus AFB would result in a 2.2 percent increase in the county's population, while implementation of the MOB 1 scenario would result in an 18.6 percent increase in the county's population. These population increases would result in beneficial impacts on socioeconomics resources within the ROI.

Under the FTU scenario, on-base jobs at Altus AFB would increase by approximately 15.9 percent and approximately 213 new indirect and induced jobs would be created in the ROI. Under the MOB 1 scenario, the addition of 1,922 personnel at Altus AFB would increase on-base jobs by approximately 49 percent, and approximately 662 indirect and induced jobs would be created in the ROI.

The USAF estimates that approximately $52 million in construction expenditures would be associated with the FTU scenario. These expenditures could generate approximately 909 jobs, primarily within the construction industry or related industries, including retail stores and food services (MIG 2012). The USAF estimates that approximately $400 million in construction expenditures would be associated with the implementation of the MOB 1 scenario at Altus AFB, and this amount could generate approximately 5,628 jobs, primarily within the construction industry or related industries, including food services, retail stores, and architectural and engineering services. It is expected that the local labor force would be sufficient to fill these new jobs without a migration of workers into the area. The indirect and induced income associated with construction expenditures under the FTU scenario is estimated to be approximately $4 million, while the MOB 1 scenario's indirect and induced income is estimated to be approximately $24 million. These jobs, and the related income, would be temporary during the construction activity.

Implementation of the FTU or MOB 1 scenario would create a potential need for approximately 144 or 1,873 housing units, respectively (USAF 2013a). The housing market in the local economy and the dormitories on Altus AFB would be anticipated to support the incoming population associated with the FTU scenario. For the MOB 1 scenario, under the assumption that 1,873 full-time military personnel would require housing off base, the housing market in the ROI and surrounding communities and counties would be able to support this need. Implementation of the FTU or MOB 1 scenario would result in an approximate influx of 140 or 1,826 school-aged dependents (students), respectively. Based on the number of school districts and schools in the county, as well as current class sizes, the schools in the county would have the capacity to support the incoming students. However, a large influx of students over a short period could result in capacity constraints and could require additional personnel.

Base services such as medical facilities, CDCs, dining, fitness, and Visiting Quarters have adequate infrastructure and staffing to support active-duty, students, and dependents projected under the FTU scenario. Several base services would require additional manpower and facilities to accommodate the incoming personnel associated with the MOB 1 scenario.

ES 4.1.11 Environmental Justice and the Protection of Children

Jackson County, Oklahoma, represents the region of comparison for evaluating disproportionate effects (in Chapter 4) on populations of concern for environmental justice and for children. Minorities, low-income populations, and children compose slightly higher portions of the county population than is found in the State of Oklahoma as a whole.

Analysis of the FTU and MOB 1 scenario noise contours relative to the baseline noise contours at Altus AFB indicates that off-base populations of minorities, low-income persons, and children

would not be exposed to noise levels above what is occurring under the baseline conditions. Therefore, implementation of either scenario at Altus AFB is not anticipated to result in disproportionate impacts on these off-base populations.

ES 4.2 FAIRCHILD AFB (MOB 1 SCENARIO)

ES 4.2.1 Noise

The current mission at Fairchild AFB includes the operation of 30 KC-135 aircraft and the H-1 and H-60 helicopter missions. Noise levels near Fairchild AFB were calculated for baseline conditions and for the MOB 1 scenario.

An additional 53 off-base acres and an estimated two additional off-base residents would be affected by noise levels greater than 65 dB DNL (Figure ES-11). Implementation of the KC-46A MOB 1 scenario at Fairchild AFB would not expose off-base areas to noise levels greater than 80 dB DNL.

At representative locations in the vicinity of the airfield, the DNL at 10 of the locations studied would increase by 1 to 2 dB, but no location would exceed 65 dB DNL. The range of the top five SEL events would not change at any of the 13 locations identified in this EIS. At Fairchild AFB, departure operations from transient aircraft, such as the EA-6B and F-18, and the based H-1 helicopter, make up the loudest five overflight events (dB SEL).

Noise would also be generated by C&D activities in support of the proposed beddown. These activities would occur in the context of an active AFB where aircraft and other types of noise are a normal part of the environment. Construction noise would be minimized in accordance with local regulations and would be temporary and intermittent, lasting only the duration of the project. Some people living or working near the construction sites may notice and be annoyed by the noise, but noise impacts would not be substantial enough to be considered significant.

ES 4.2.2 Air Quality

Air emissions produced from the MOB 1 scenario at Fairchild AFB would mainly affect air quality within Spokane County. Spokane County attains all of the NAAQS and Washington ambient air quality standards. The urban area of Spokane is in maintenance areas of the NAAQS for CO and particulate matter less than or equal to 10 microns in diameter (PM_{10}).

An estimate of emissions from construction activities that would occur under the MOB 1 scenario show that for each year of construction, total emissions would remain well below the PSD thresholds. Therefore, proposed construction would produce less than significant air quality impacts (see Table 4-13 in the Final EIS).

The net increase in annual operational emissions within Spokane County from the MOB 1 scenario at Fairchild AFB would remain below all PSD thresholds except for NO_x emissions (see Table 4-14 in the Final EIS).

The NO_x emission increases associated with the MOB 1 scenario would amount to about 4 percent of the total NO_x emissions generated by Spokane County in 2008. The majority of proposed NO_x emissions would occur from KC-46A aircraft operations up to an altitude of 3,000 feet AGL and across several square miles and would be adequately dispersed through this volume of atmosphere to the point that they would not result in substantial ground-level impacts in a localized area. Given that the county attains the nitrogen dioxide (NO_2) NAAQS by a wide margin, these NO_x emission increases would likely not be substantial enough to contribute to an exceedance of the NO_2 NAAQS.

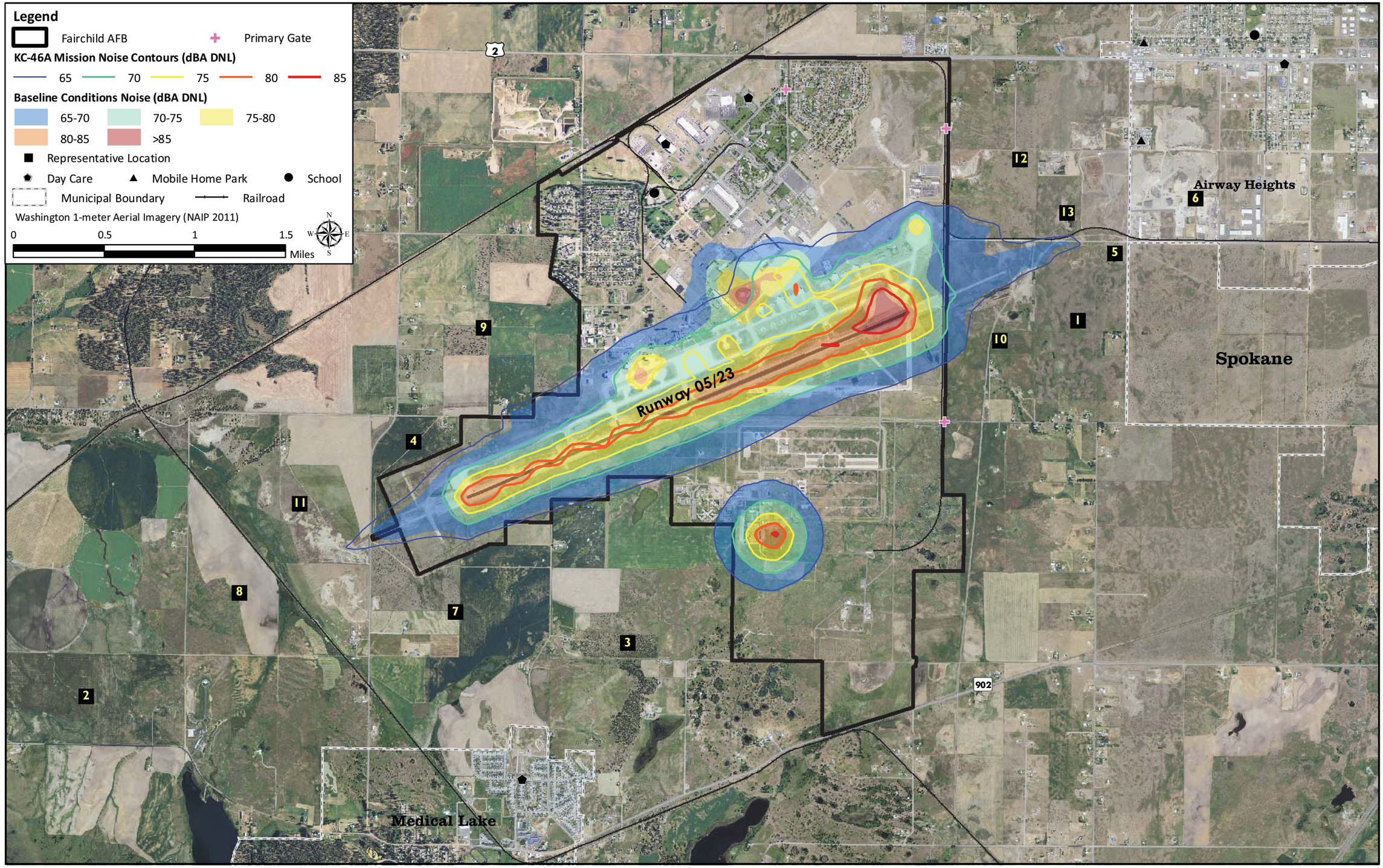

Figure ES-11. KC-46A MOB 1 Scenario and Baseline Noise Contours at Fairchild AFB

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Maximum O_3 levels in the Spokane region are near the national 8-hour O_3 standard. As mentioned above, emissions from the proposed KC-46A aircraft operations would be diluted over a large volume of atmosphere across the Fairchild AFB project region. These factors would dilute the impact of NO_x (and VOC) emissions from the proposed action within a localized area and to ambient O_3 levels. As a result, the increase in emissions may not be substantial enough to contribute to an exceedance of the O_3 NAAQS. Nonetheless, the NO_x emissions projected to result from implementation of the KC-46A MOB 1 scenario represent a 4 percent annual increase and the potential for a 2 ton per day, or more, increase in NO_x emissions in the ROI which, when taken together with the slight annual/daily increase in VOCs from the action in combination with all other sources of both precursor emissions in the region, could be substantial enough to contribute to an exceedance of the O_3 NAAQS.

The net change in emissions that would occur from the MOB 1 scenario within the Spokane CO and PM_{10} maintenance areas would not exceed the applicable conformity thresholds for these areas of 100 tons per year for CO or PM_{10}. Therefore, the MOB 1 scenario at Fairchild AFB would produce less than significant CO and PM_{10} impacts within these areas.

ES 4.2.3 Safety

Implementation of the KC-46A MOB 1 scenario at Fairchild AFB is not anticipated to result in any net increase in the safety risks associated with aircraft mishaps or any increase in the risks of occurrence of those mishaps, even with the additional aircraft and increased flight operations. Since future aircraft flight operations would remain similar to those currently experienced at Fairchild AFB, the overall potential for bird/wildlife-aircraft strikes is not anticipated to be significantly greater than current levels. KC-46A aircrews would be required to continue the applicable procedures outlined in the Bird/Wildlife-Aircraft Strike Hazard (BASH) Plan.

Portions of the clear zones (CZs) on both ends of the runway fall outside of the base boundary, and Fairchild AFB has restrictive easements that give the base control over the development of that land. There is incompatible development within Accident Potential Zone (APZ) II. Fairchild AFB would continue working with developers to adopt planning and zoning regulations that ensure compatibility between local development and the USAF mission.

ES 4.2.4 Soils and Water

All of the C&D activities associated with the proposed KC-46A MOB 1 scenario would occur within the Fairchild AFB boundary. The total disturbed area for the projects associated with the MOB 1 scenario would not exceed 40 acres.

ES 4.2.5 Biological Resources

There are no known federally or state-listed species and/or designated critical habitat occurring in the ROI associated with the MOB 1 scenario at Fairchild AFB. There would be no impacts on special-status species resulting from implementation of the MOB 1 scenario at Fairchild AFB. Development activities would occur in currently developed or disturbed areas that provide little wildlife habitat value and are not anticipated to result in significant impacts.

There are no known wetlands in any of the areas proposed for development with implementation of the KC-46A MOB 1 scenario at Fairchild AFB. Therefore, implementation of the MOB 1 scenario is not anticipated to directly or indirectly impact wetlands.

ES 4.2.6 Cultural Resources

According to the Washington Department of Archaeology and Historic Preservation (DAHP), three buildings (2025, 2050, and 2245) are eligible for the NRHP. The Flight Line Historic District (consisting of 17 individual buildings) is also eligible for the NRHP. However, a Memorandum of Agreement (MOA) between the Commander of the 92nd Air Refueling Wing (ARW), the DAHP, and the Spokane City Historic Preservation Office was signed in November 2012, allowing Fairchild AFB to demolish buildings within the district with certain stipulations (92 ARW 2012) regarding impact mitigation prior to demolition.

Demolition proposed to occur along the flightline would remove five buildings in the Flight Line Historic District: 1011, 1013, 1015, 1017, and 1019. Three additional buildings in the Flight Line Historic District are proposed for renovation: 1001, 1003, and 1025. One additional building (2120) proposed for demolition is located outside the flightline area. Impacts on all of these buildings were previously mitigated through stipulations agreed to in the MOA.

The DAHP has concurred that Building 2050, constructed in 1943, is eligible for the NRHP. Renovations to this building would have an adverse effect on the historic integrity of the property. Fairchild AFB has amended the existing MOA for the demolition of buildings in the flightline district to include potential adverse impacts to Building 2050. Should Fairchild AFB be selected to host the MOB 1 scenario, the MOA amendment commits the USAF to conduct appropriate mitigation for adverse impacts to Building 2050 (see Final EIS Volume II, Appendix A, Section A.5.2.2).

Archaeological surveys have been conducted on Fairchild AFB and resulted in the documentation of three historic archaeological sites; however, there are no NRHP-eligible archaeological resources on Fairchild AFB. No impacts on archaeological historic properties are anticipated to result from implementing the MOB 1 scenario at Fairchild AFB.

No adverse Section 106 impacts are anticipated to tribal resources. Consultation with four tribes resulted in no disagreement with the USAF finding of no adverse impact. Tribal consultation for the KC-46A MOB 1 beddown proposal is now complete.

ES 4.2.7 Land Use

All of the development proposed as part of the KC-46A MOB 1 scenario would be completed in appropriate land use areas on base. None of the physical development associated with implementation of the MOB 1 scenario at Fairchild AFB is anticipated to result in significant impacts on base land use. Land use immediately surrounding Fairchild AFB is predominantly agricultural and grazing. Very low-density residential development occurs, with minimum lot sizes of 3 to 10 acres on the south, west, and north sides of the base. The USAF has restrictive easements on privately and publicly owned land adjacent to Fairchild AFB within the CZs to protect against incompatible uses. Airfield operations and base land use are compatible with adjacent land uses and do not have any notable compatibility issues, either internally or outside the base boundary. Overall, no significant impacts on land use at Fairchild AFB are anticipated to result from aircraft operations associated with the implementation of the KC-46A MOB 1 scenario.

ES 4.2.8 Infrastructure

No significant adverse impacts are anticipated on the infrastructure and utility system from the implementation of the MOB 1 scenario at Fairchild AFB. The infrastructure system has adequate supply and/or capacity to accommodate the new mission. Application of the DoD diversion rate would result in approximately 13,763 tons of the total 22,937 tons of potential C&D debris being

diverted for reuse or recycling (USEPA 2009). The remaining C&D debris would go to local permitted landfill(s).

Construction-related traffic associated with the facilities and infrastructure projects planned for the proposed KC-46A MOB 1 scenario at Fairchild AFB would make up only a small portion of the total existing traffic volume in the area and at the base. No long-term or significant impacts on transportation systems are anticipated to result.

ES 4.2.9 Hazardous Materials and Waste

Discussion of the minimization or elimination of hazardous materials as it applies to Fairchild AFB is described in Section ES 4.1.9. Demolition, renovation, and addition/alteration projects are planned as part of the MOB 1 scenario at Fairchild AFB. Prior to initiating any of the projects, buildings would be evaluated for the presence or absence of asbestos and LBP. Final EIS Volume II, Appendix E, Table E-3, contains a list of buildings proposed for modification and their potential to contain asbestos and/or LBP. Handling and disposal of asbestos and LBP wastes would be conducted in accordance with applicable regulations.

ES 4.2.10 Socioeconomics

Implementation of the KC-46A MOB 1 scenario at Fairchild AFB would increase the population in Spokane County by 1,095 people and would result in a 0.2 percent increase in the county population after taking into consideration the manpower decrease associated with the KC-135 drawdown. The increase would not be expected to affect police, fire, or other services.

The addition of 438 personnel to the work force (including full-time military personnel, DoD civilians, and contractors) would increase on-base jobs by approximately 9.7 percent and would add approximately 303 indirect and induced jobs within the ROI. With an unemployment rate of 8.6 percent in 2012, it is expected that the local labor force would be sufficient to fill these new jobs without a migration of workers into the area.

The USAF estimates that approximately $292 million in construction expenditures would be associated with the MOB 1 scenario at Fairchild AFB. This could generate approximately 3,022 jobs primarily within the construction industry or related industries, including food services, retail stores, and architectural and engineering services (MIG 2012). It is expected that the local labor force would be sufficient to fill these new jobs. The indirect and induced income associated with construction expenditures is estimated to be approximately $65.5 million. These jobs, and the related income, would be temporary during the construction activity.

Implementation of the MOB 1 scenario would potentially generate a need for approximately 417 housing units. This is based on the difference between the drawdown of 1,239 full-time military personnel relative to the 1,656 incoming full-time military personnel and the assumption that only full-time military personnel would require housing. The housing market in the ROI would be anticipated to support the incoming personnel. Approximately 407 military dependents of school age would be anticipated to enter the Spokane Public School District under the MOB 1 scenario. Based on the number of schools in the county and the current class sizes, the schools have the capacity to support the incoming students. Base services have sufficient capacity in the CDC, housing, fitness, and dining facilities to support the incoming personnel under the current infrastructure.

ES 4.2.11 Environmental Justice and the Protection of Children

Spokane County, Washington, represents the region of comparison for evaluating disproportionate effects on populations of concern for environmental justice and for children. The proportion of minority persons in Spokane County is much lower than the state of Washington and the Nation as a whole. Low-income persons compose a slightly higher proportion of the county's population than in the State of Washington, but the county's proportion is typical of the Nation's. The proportion of children in the county population is similar to that in the state of Washington and the Nation.

Analysis of the MOB 1 scenario noise contours relative to the baseline contours at Fairchild AFB indicates that off-base populations of minorities, low-income persons, and children would not be exposed to noise levels above what is occurring under the baseline conditions. Therefore, implementation of the MOB 1 scenario at Fairchild AFB is not anticipated to result in disproportionate impacts on these off-base populations.

ES 4.3 GRAND FORKS AFB (MOB 1 SCENARIO)

ES 4.3.1 Noise

In addition to a variety of transient aircraft, the only aircraft that are currently operating at Grand Forks AFB are three types of RPAs. KC-46A aircraft are louder than the propeller-driven MQ-1 Predator and MQ-9 Reaper but are not as loud as the jet-powered RQ-4 Global Hawk aircraft in typical landing and takeoff configurations. Noise levels near Grand Forks AFB were calculated for baseline conditions and the MOB 1 scenario.

Implementation of the KC-46A MOB 1 scenario would increase the number of off-base acres affected by noise levels equal to or greater than 65 dB DNL from 0 to 62 acres (Figure ES-12). Based on analysis of aerial photography, the estimated number of off-base residents exposed to 65 dB would remain zero. No off-base areas or residents would be exposed to noise levels greater than 80 dB DNL. On base, no structures would be affected by noise levels of 80 dB DNL or greater.

Noise levels at all 11 representative locations would increase, but would remain under 65 dB DNL. KC-46A aircraft operations are included in the loudest five overflights SEL range at each representative location.

Noise would also be generated by C&D activities in support of the proposed beddown. These activities would occur in the context of an active AFB where aircraft and other types of noise are a normal part of the environment. Construction noise would be minimized in accordance with local regulations and would be temporary and intermittent, lasting only the duration of the project. Some people living or working near the construction sites may notice and be annoyed by the noise, but noise impacts would not be substantial enough to be considered significant.

ES 4.3.2 Air Quality

Air emissions produced from the MOB 1 scenario at Grand Forks AFB would mainly affect air quality within Grand Forks County.

An estimate of emissions from construction activities that would occur as a result of the MOB 1 scenario show that for each year of construction, total emissions would remain well below the PSD thresholds (see Table 4-19 in the Final EIS).

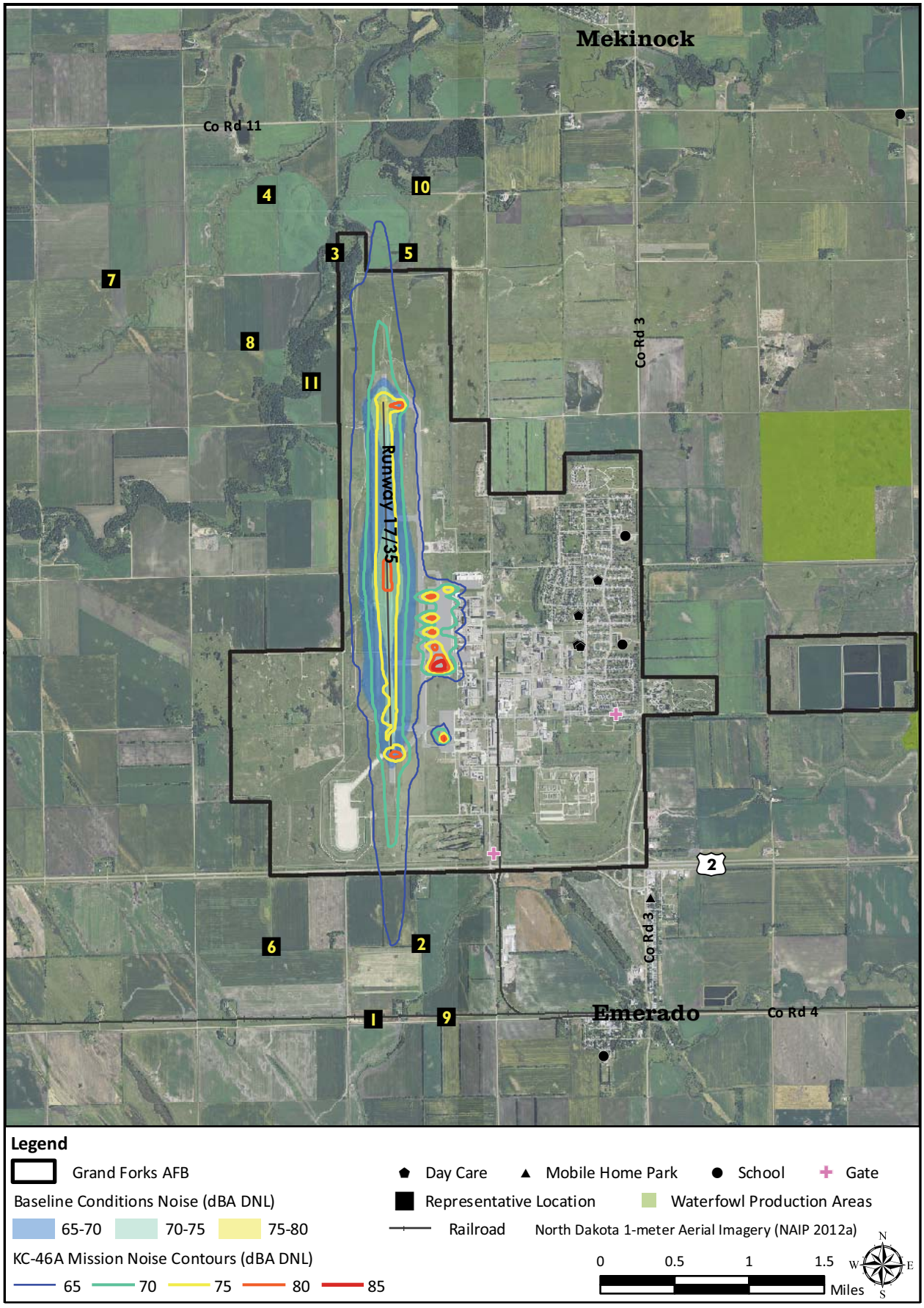

Figure ES-12. KC-46A MOB 1 Scenario and Baseline Noise Contours at Grand Forks AFB

The net increase in annual operational emissions from the MOB 1 scenario at Grand Forks AFB would remain below all PSD thresholds except for CO and NO_x emissions (see Table 4-20 in the Final EIS). The majority of proposed CO and NO_x emissions would occur from the operation of KC-46A aircraft up to an altitude of 3,000 feet AGL and across several square miles. These emissions would be adequately dispersed through this volume of atmosphere to the point that they would likely not result in substantial ground-level impacts in a localized area. Grand Forks County generates relatively low amounts of CO and NO_x emissions and it attains all NAAQS and North Dakota Ambient Air Quality Standards. Therefore, emissions of CO and NO_x from proposed KC-46A MOB 1 scenario operations at Grand Forks AFB would produce less than significant air quality impacts.

ES 4.3.3 Safety

Reintroduction of an aerial refueling mission at Grand Forks AFB is not anticipated to result in any net increase in the safety risks associated with aircraft mishaps or any increase in the risks of occurrence of those mishaps. The basing of 36 KC-46A MOB 1 scenario aircraft would not increase the risk of aircraft accidents due to wildlife strikes. Ongoing elements of the Grand Forks BASH Plan (Grand Forks AFB 2009) would continue with updates as required to address the operations of the KC-46A. The KC-46A would have the capability to jettison fuel during non-routine or emergency situations only.

Operations and maintenance procedures conducted by base personnel would change from current conditions and procedures, and instructions would be modified to incorporate the new KC-46A MOB 1 scenario. The parking plan for the 36 KC-46A aircraft was specifically designed to minimize conflict with existing RPA missions. The USAF does not anticipate any significant safety impacts as a result of construction, demolition, or renovation if all applicable AFOSH and OSHA requirements are implemented.

The most current APZ and CZ delineation is based upon the KC-135 aircraft previously stationed at Grand Forks AFB. These are very conservative with regard to the current RPA missions, but are suitable for other aircraft that may use the runway such as transient KC-135. There is no existing incompatible development within the CZs and APZs. Therefore, construction activity and subsequent operations within new or renovated structures on the airfield would not result in any greater safety risk, and no significant impact related to APZs would occur.

ES 4.3.4 Soils and Water

All of the C&D activities associated with the proposed KC-46A MOB 1 scenario would occur within the Grand Forks AFB boundary. The total disturbed area for the projects proposed as part of the KC-46A MOB 1 scenario would not exceed 35 acres.

ES 4.3.5 Biological Resources

Implementation of the MOB 1 scenario is not anticipated to impact any of the protected species known to occur at Grand Forks AFB. No federally listed species or critical habitats are known to occur on base. All of the activities would occur in currently developed or semi-developed areas that provide little wildlife habitat value and are not anticipated to result in significant impacts.

Approximately 2 acres of potential wetlands would be impacted by the proposed action. Proposed construction sites for the new KC-46A Squadron Operation/Aircraft Maintenance Unit building, the Composite Shop, the Flight Simulator and Building 622 (proposed for renovation) are located close to wetlands that could be affected by erosion and sedimentation; however, implementation of an

effective Storm Water Pollution Prevention Plan (SWPPP) and construction best management practices would prevent stormwater run-off from entering wetlands at the base.

Should Grand Forks AFB be selected to host the MOB 1 scenario, the USAF would work with the U.S. Army Corps of Engineers (USACE) and North Dakota Department of Health (NDDH) to determine if any of the impacted wetlands are subject to regulation under Sections 401/404 of the Clean Water Act (CWA). The USAF would work with regulators to determine any permit conditions, including mitigation requirements (as appropriate).

ES 4.3.6 Cultural Resources

Actions associated with the proposed KC-46A MOB 1 scenario include the renovation of Facility 221 (a dormitory), which is eligible for the NRHP. However, because it is addressed in the Advisory Council on Historic Preservation's (ACHP) Program Comment for Unaccompanied Personnel Housing (ACHP 2006), completion of the mitigation measures specified in the program comment have resolved any future adverse effects. All other buildings associated with implementing the KC-46A MOB 1 scenario at Grand Forks AFB have been evaluated for NRHP eligibility. None of these facilities have been determined to be NRHP eligible. The North Dakota SHPO has concurred with this finding, and also has concurred that no historic properties would be affected (see Final EIS Volume II, Appendix A, Section A.4.3). No impact on archaeological historic properties is anticipated to result from implementing the KC-46A MOB 1 scenario. Ground-disturbing activities would occur in previously disturbed contexts.

No adverse Section 106 impacts to tribal resources are anticipated. The USAF consulted with 23 tribes and one tribe expressed concerns regarding the potential for impacts. Following further consultation with the one tribe, the USAF concluded consultation with a finding of no adverse impact. Section 106 consultation for the KC-46A MOB 1 beddown proposed alternative at Grand Forks AFB is now complete.

ES 4.3.7 Land Use

Overall, no significant impacts on land use at Grand Forks AFB are anticipated to result from implementation of the KC-46A MOB 1 scenario. All of the development proposed as part of the KC-46A MOB 1 scenario would be completed in appropriate land use areas on base. None of the physical development associated with implementation of the KC-46A MOB 1 scenario at Grand Forks AFB is anticipated to result in significant impacts on base land use. Zoning surrounding the base generally supports compatible land use planning and provides for review and protection of the areas surrounding the airfield.

ES 4.3.8 Infrastructure

The MOB 1 scenario would approximately double the number of people on the base; however, no significant adverse impacts are anticipated on the infrastructure and utility system. The Grand Forks AFB infrastructure system has adequate supply and/or capacity to accommodate the new mission. Application of the DoD diversion rate would result in approximately 28,738 tons of the total 47,896 tons of potential C&D debris being diverted for reuse or recycling (USEPA 2009). The remaining C&D debris would go to local permitted landfill(s). Only minor impacts on the solid waste management system at Grand Forks AFB are anticipated.

Construction-related traffic resulting from the facilities and infrastructure projects required for the MOB 1 scenario at Grand Forks AFB would minimally add to the total existing traffic volume in the area and at the base. The gate on the U.S. Highway 2 interchange would be used for all traffic.

The MOB 1 scenario at Grand Forks AFB would result in an increase of approximately 70 percent in daily commuting traffic to and from the base. Regional access roads and the on-base road network have adequate capacity to absorb the amount of additional traffic without major impacts on traffic flow, circulation, or level of service. As a result, no long-term or significant impacts to on- or off-base transportation systems would result.

ES 4.3.9 Hazardous Materials and Waste

Discussion of the minimization or elimination of hazardous materials as it applies to Grand Forks AFB is described in Section ES 4.1.9. Prior to initiating any demolition, renovation, and addition/alteration projects planned as part of the MOB 1 scenario, buildings would be evaluated for the presence or absence of asbestos and LBP. Final EIS Volume II, Appendix E, Table E-4, contains a list of buildings proposed for modification and their potential to contain asbestos and/or LBP. Handling and disposal of asbestos and LBP wastes would be conducted in accordance with applicable regulations.

ES 4.3.10 Socioeconomics

Implementation of the KC-46A MOB 1 scenario at Grand Forks AFB would increase the population by approximately 4,526 people, which represents a 6.8 percent increase in the county population. The addition of 1,747 personnel (including full-time military personnel, DoD civilians, and contractors) at Grand Forks AFB would increase on-base jobs by approximately 69 percent and would add approximately 908 indirect and induced jobs in the ROI. Most of the jobs would be created in industries such as food services, private hospitals, offices of health practitioners, and retail stores. With a 2012 unemployment rate of 3.7 percent, it is expected that the local labor force would be sufficient to fill these new jobs without a migration of workers into the area.

The USAF estimates that approximately $345 million in construction expenditures would be associated with the MOB 1 scenario at Grand Forks AFB. This amount could generate approximately 4,326 jobs primarily within the construction industry or related industries. It is expected that the local labor force would be sufficient to fill these new jobs. The indirect and induced income associated with construction expenditures is estimated to be approximately $51 million. Implementation of the KC-46A MOB 1 scenario at Grand Forks AFB is expected to potentially require off-base housing for approximately 1,724 military personnel. Based on the number of vacant homes, as indicated in Section 3.3.10.1.3, the housing market in the ROI would be anticipated to support the full-time military personnel and military dependents associated with the MOB 1 scenario at Grand Forks AFB.

Approximately 1,681 dependents of school age would be anticipated to enter any of the nine public school districts in Grand Forks County. A large influx of students over a short period could result in capacity constraints and could require additional personnel.

Base services have sufficient capacity in the CDC, housing, fitness, and dining facilities to support the incoming personnel under the current infrastructure.

ES 4.3.11 Environmental Justice and the Protection of Children

Grand Forks County represents the region of comparison for evaluating disproportionate effects on populations of concern for environmental justice and for children. The proportion of minority persons (11.35 percent) in Grand Forks County is similar to the State of North Dakota, but much lower than is typical in the Nation (36.25 percent) as a whole. Low-income persons compose a slightly higher proportion of the county's population (16.7 percent) than in the State of North Dakota and the Nation as a whole. Also, the proportion of children in the county population is slightly lower (20.1 percent) than found in the State of North Dakota and the Nation.

Analysis of the MOB 1 scenario noise contours relative to the baseline contours at Grand Forks AFB indicates that off-base populations of minorities, low-income persons, and children would not be exposed to noise levels above what is occurring under the baseline conditions. Therefore, implementation of the MOB 1 scenario at Grand Forks AFB is not anticipated to result in disproportionate impacts on these off-base populations.

ES 4.4 McCONNELL AFB (FTU OR MOB 1 SCENARIO)

ES 4.4.1 Noise

The current mission at McConnell AFB includes the operation of 44 KC-135 aircraft. Noise levels were calculated for baseline conditions and the KC-46A FTU and MOB 1 scenarios at McConnell AFB (see Figures ES-13 and ES-14).

ES 4.4.1.1 FTU Scenario Noise Consequences

The number of off-base acres affected by noise levels greater than 65 dB DNL would increase from 724 to 997 acres. The estimated number of residents affected by this same level of noise would increase from 214 to 808 residents. Implementation of the KC-46A FTU scenario at McConnell AFB would not expose off-base areas to noise levels greater than 80 dB DNL.

Noise levels at all eight representative locations would increase between 1 and 2 dB under the FTU scenario. Increases in time-averaged noise levels near the base would be a result of increases in KC-46A operations tempo instead of the aircraft being louder. The range of SELs of the loudest five overflights would change to include KC-46A operations at Locations 3 and 7 under the FTU scenario.

At all three of the auxiliary airfields (CSM, FOE, ICT), the proposed KC-46A FTU scenario would not be expected to have any noticeable effect on noise levels.

Noise would also be generated by C&D activities in support of the proposed beddown. These activities would occur in the context of an active AFB where aircraft and other types of noise are a normal part of the environment. Construction noise would be minimized in accordance with local regulations and would be temporary and intermittent, lasting only the duration of the project. Some people living or working near the construction sites may notice and be annoyed by the noise, but noise impacts would not be substantial enough to be considered significant.

ES 4.4.1.2 MOB 1 Scenario Noise Consequences

The total number of acres (on and off base) and the number of off-base residents affected by noise levels greater than 65 dB DNL would decrease under the MOB 1 scenario. Reduction in noise levels can be generally attributed to the replacement of the KC-135 with the slightly quieter KC-46A. Similar to baseline conditions, the KC-46A MOB 1 scenario at McConnell AFB would not expose off-base areas to noise levels greater than 80 dB DNL.

Noise levels at several representative locations surrounding McConnell AFB (see Figure ES-14) were analyzed for noise conditions under the MOB 1 scenario. Changes in DNL would range from a decrease of 1 to 5 dB at all locations. KC-46A departure and closed pattern operations were part of the top five SEL noise contributors for Locations 3 and 7 under the MOB 1 scenario. Construction noise would be similar or slightly higher than that described for the FTU scenario. Due to the temporary and intermittent nature of C&D and its associated noise level, noise impacts would not be substantial enough to be considered significant.

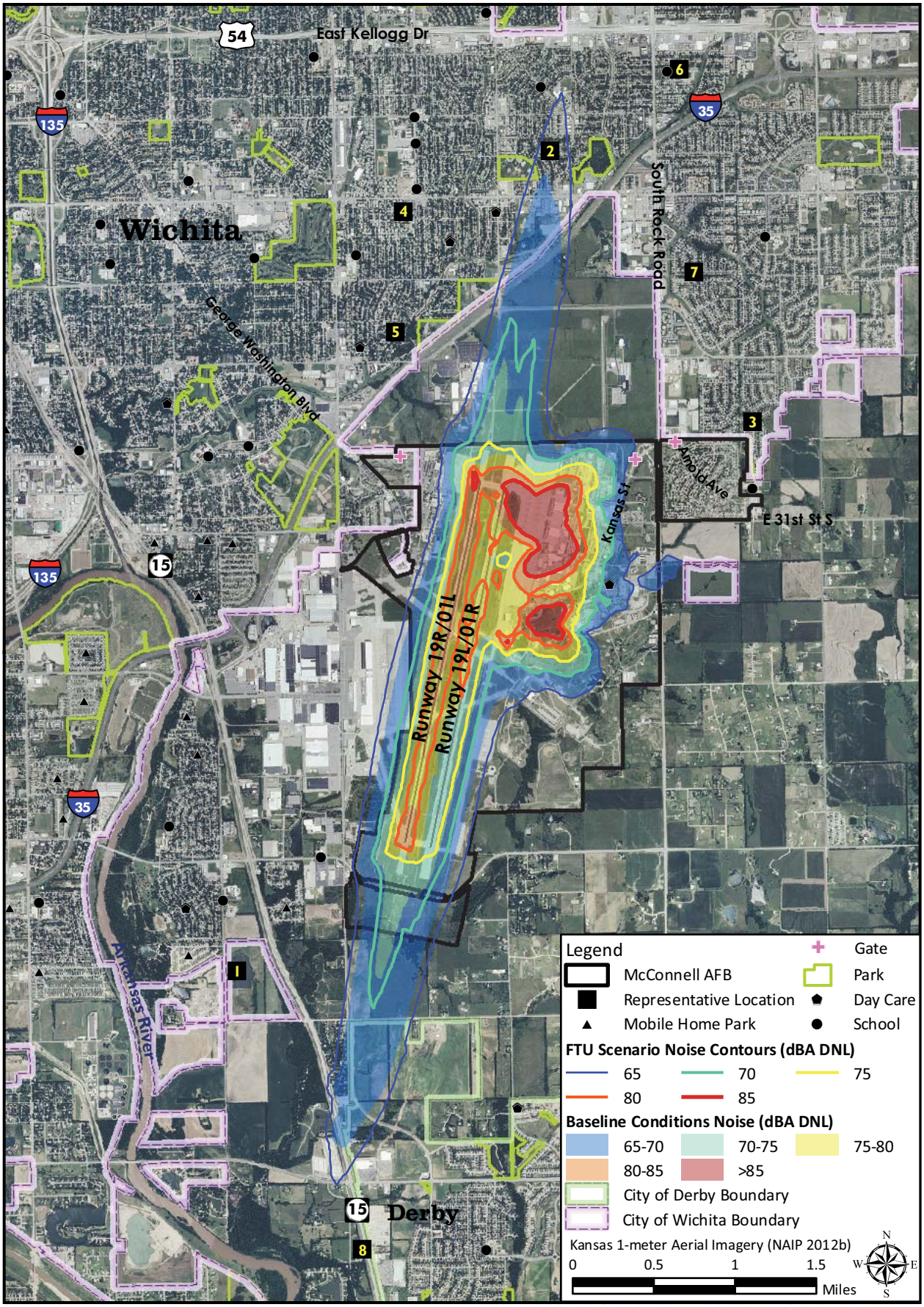

Figure ES-13. KC-46A FTU Scenario and Baseline Noise Contours at McConnell AFB

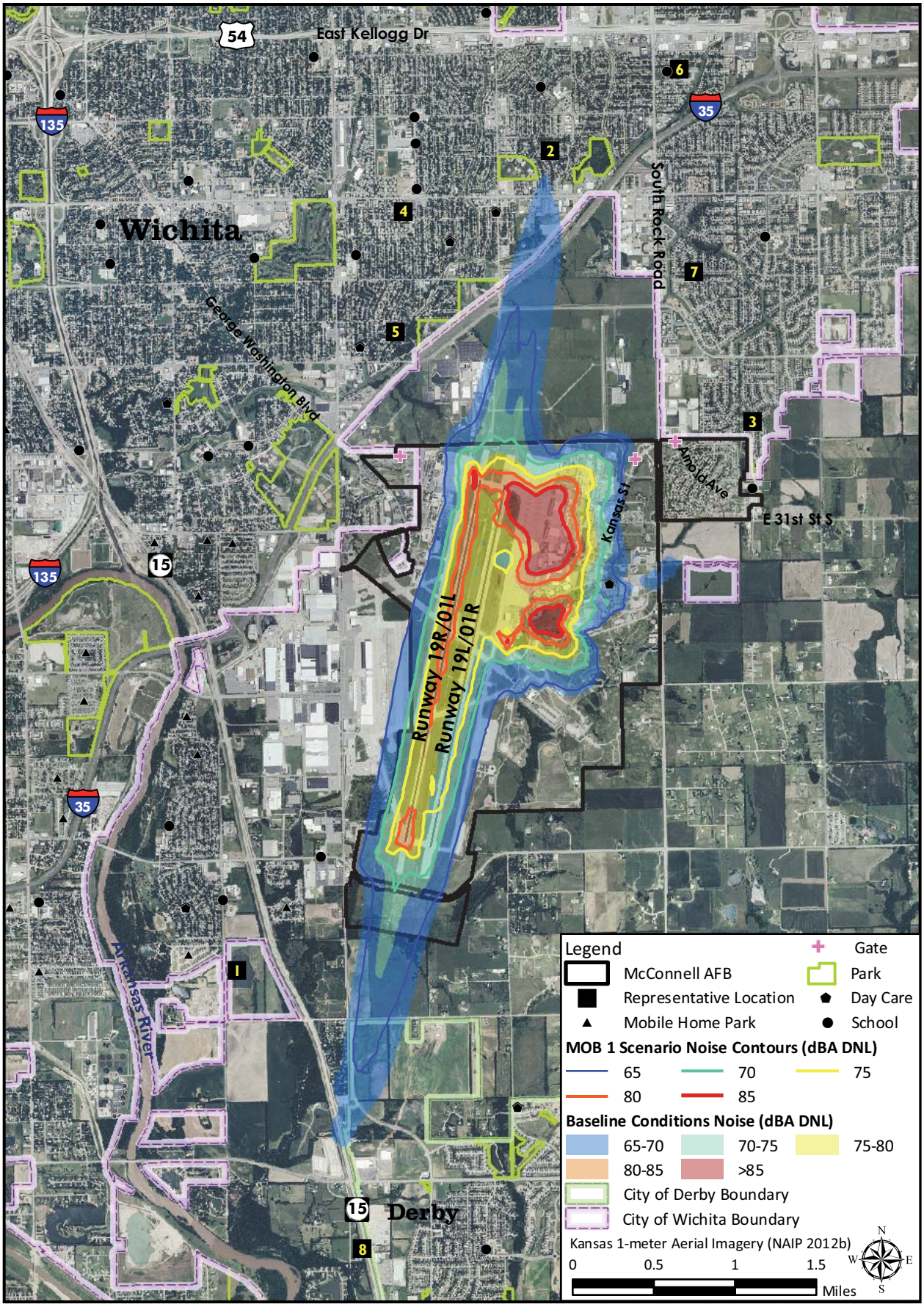

Figure ES-14. KC-46A MOB 1 Scenario and Baseline Noise Contours at McConnell AFB

ES 4.4.2 Air Quality

Air emissions produced from the FTU and MOB 1 scenarios at McConnell AFB would mainly affect air quality within the greater Wichita area and Sedgwick County. Currently, Sedgwick County is in attainment of the NAAQS for all pollutants. However, maximum O_3 levels recently recorded in the Wichita area are slightly higher than the national standard. The regions surrounding McConnell AFB and the auxiliary airfields proposed for use by the FTU scenario also attain all of the NAAQS.

ES 4.4.2.1 FTU Scenario Air Quality Consequences

An estimate of emissions from construction activities that would occur under the FTU scenario at McConnell AFB show that, for each year of construction, total emissions would remain well below the PSD thresholds; therefore, they would produce less than significant air quality impacts (see Table 4-25 in the Final EIS).

The net increase in annual operational emissions from the FTU scenario at McConnell AFB would remain below all PSD thresholds except for NO_x emissions (see Table 4-26 in the Final EIS).

The NO_x emission increases that would result from operation of the FTU scenario would amount to about 5 percent of the total NO_x emissions generated by Sedgwick County in 2008. The majority of proposed NO_x emissions would occur from KC-46A aircraft operations up to an altitude of 3,000 feet AGL and across several square miles. These emissions would be adequately dispersed through this volume of atmosphere to the point that they would not result in substantial ground-level air quality impacts in any localized area. Given that the county attains the NO_2 NAAQS by a wide margin, these NO_x emission increases would likely not be substantial enough to contribute to an exceedance of the NO_2 NAAQS.

The above analysis demonstrates that emissions from the proposed KC 46A aircraft operations would be diluted over a large volume of atmosphere across the McConnell AFB project region. This effect would minimize the impact of proposed NO_x emissions to ambient O_3 levels. However, the increase in NO_x emissions generated from operation of the FTU scenario would amount to approximately 5 percent annual increase and potentially a 4 ton per day, or more, increase in NO_x emissions emitted within Sedgwick County as a whole. These NO_x emissions would occur in an area that is in jeopardy of not continuing to attain the NAAQS for O_3. Therefore, the increase in NO_x (and VOC) emissions resulting from implementation of the FTU scenario, in combination with all other sources of those precursor emissions in Sedgwick County on a given day, could be substantial enough to contribute to an exceedance of the O_3 NAAQS in the region.

The annual emissions that would result from KC-46A operations proposed at each auxiliary airfield associated with the FTU scenario show that the increase in proposed emissions at CSM, FOE, and ICT would not exceed a PSD threshold (see Table 4-27 in the Final EIS). Therefore, KC-46A operations at each auxiliary airfield associated with the FTU scenario would produce less than significant air quality impacts.

ES 4.4.2.2 MOB 1 Scenario Air Quality Consequences

An estimate of emissions from construction activities that would result from implementation of the MOB 1 scenario at McConnell AFB show that for each year of construction, total emissions would remain well below the PSD thresholds; therefore they would produce less than significant air quality impacts (see Table 4-28 in the Final EIS).

The net increase in annual operational emissions from the MOB 1 scenario at McConnell AFB would remain below all PSD thresholds except for NO_x emissions (see Table 4-29 in the Final EIS).

The NO_x emission increases that would result from operation of the MOB 1 scenario would amount to about 3 percent of the total NO_x emissions generated by Sedgwick County in 2008 (see Table 4-31 in the Final EIS). Similar to what is described above for the proposed FTU scenario, NO_x emission increases from the MOB 1 scenario would likely not have the potential to contribute to an exceedance of the NO_2 NAAQS.

The NO_x emissions from operation of the MOB 1 scenario would occur in an area that is in jeopardy of not continuing to attain the NAAQS for O_3. These emissions would represent a 2 percent annual increase and a potential 2 ton, or more, daily increase in NO_x emissions in the region. Therefore, the increase in NO_x (and VOC) emissions resulting from operation of the MOB 1 scenario, in combination with all other sources of O_3 precursor emissions in Sedgwick County on a given day, could be substantial enough to contribute to an exceedance of the O_3 NAAQS in the region.

ES 4.4.3 Safety

Implementation of either scenario at McConnell AFB is not anticipated to result in any net increase in the safety risks associated with aircraft mishaps or any increase in the risks of occurrence of those mishaps. The addition of up to eight aircraft associated with the FTU scenario could slightly increase the risk of aircraft accidents due to bird/wildlife-aircraft strikes. KC-46A aircrews would be required to continue the applicable procedures outlined in the McConnell AFB BASH Plan.

ES 4.4.4 Soils and Water

The majority of the proposed C&D activities for the FTU scenario would occur in areas of the base that are already developed and/or previously disturbed by excavation. The total disturbed area for the FTU scenario would not exceed 7 acres. The total disturbed area for the MOB 1 scenario would not exceed 12 acres. Improvements to the deicing containment system would occur as part of the proposed action. Although the increase in aircraft operations could result in an increase in the amount of deicing fluid being used, improvements to the current deicing system will be designed to increase the operational efficiency of the deicing process and minimize the amount of deicing fluid entering the drainage area. Expansion of the deicing pads in this area of the base has the potential for both minor adverse and beneficial impacts to the quality of stormwater runoff.

To the maximum extent practical, land disturbance in floodplains would be avoided. However, Building 1220 is located near the 100-year floodplain of McConnell Creek and is proposed for an 8,000-square-foot addition as part of the MOB 1 scenario. The addition is located within the floodplain. Should McConnell AFB be selected to host the MOB 1 scenario, a Finding of No Practicable Alternative (FONPA) would be prepared in accordance with 32 CFR 989 and Executive Order (EO) 11988, Floodplain Management, and would include actions to minimize potential impacts. The USAF has considered alternatives to construction in the floodplain. Although McConnell Creek is a jurisdictional stream, the project would not extend into the jurisdictional boundaries of this creek.

ES 4.4.5 Biological Resources

There are no federally or state-listed species and/or designated critical habitat at McConnell AFB. The majority of the projects proposed as part of the FTU and MOB 1 scenarios would occur in currently developed or disturbed areas that provide little habitat value, and would result in no significant impacts on vegetation. These areas provide little wildlife habitat value

and development is not anticipated to result in significant impacts. With the exception of the proposed deicing pad expansion, overall effects on wildlife would be similar to those described for the other alternative bases. Minor adverse and minor beneficial impacts to aquatic life could occur as a result of expanded deicing activities.

There are no known wetlands in any of the areas proposed for development and implementation of the KC-46A FTU or MOB 1 scenario at McConnell AFB. Therefore, implementation of either scenario is not anticipated to directly or indirectly impact wetlands.

ES 4.4.6 Cultural Resources

None of the buildings proposed to support the FTU scenario at McConnell AFB are considered eligible for listing on the NRHP. No impacts on archaeological historic properties are anticipated to result from implementation of the FTU scenario. In the case of unanticipated or inadvertent discoveries, the USAF would comply with Section 106 of the National Historic Preservation Act (NHPA), as specified in standard operating procedures described in the Integrated Cultural Resources Management Plan (ICRMP) (McConnell AFB 2004).

McConnell AFB has determined that three buildings associated with the MOB 1 scenario are eligible for listing on the NRHP: 1106, 1107, and 1218. Demolition of Building 1106 would be an adverse effect, while renovations to Buildings 1107 and 1218 would be effects, but not adverse effects. McConnell AFB has also determined that the remaining buildings and structures associated with the MOB 1 scenario are not eligible for listing on the NRHP. The USAF has signed a MOA with the SHPO to mitigate adverse effects on Building 1106 (see Final EIS Volume II, Appendix A, Section A.5.4.9).

No impacts on archaeological historic properties are anticipated to result from implementation of the FTU or the MOB 1 scenario. Ground-disturbing activities would occur in previously disturbed contexts. Those areas not already beneath previously modified surfaces have been surveyed for the presence of archaeological resources; no NRHP-eligible archaeological sites have been found.

No adverse Section 106 impacts to tribal resources are anticipated. Consultation with 12 tribes resulted in no disagreement with the USAF finding of no adverse impact. Tribal consultation for the KC-46A FTU and MOB 1 beddown proposal is now complete.

ES 4.4.7 Land Use

The majority of the physical development proposed to implement the FTU or the MOB 1 scenario at McConnell AFB would occur in existing industrial areas along the flightline or adjacent administrative area. Although implementation of the MOB 1 scenario would involve substantially more new construction, renovation, and development than the FTU scenario, the proposed C&D activities are consistent with the current and future layout and organization of land use in the base's 2011 Installation Development Plan (IDP).

Current zoning around the base would allow for new residential, commercial and industrial development which could be incompatible with accident potential and increased noise around the airfield resulting from either scenario. Potentially adverse impacts on land use could result from the MOB 1 scenario, considering recommended compatibility criteria for the CZs and APZs. Continued coordination between the base and the zoning administrators of surrounding areas would reduce the potential for approval of future incompatible development.

ES 4.4.8 Infrastructure

No significant adverse impacts are anticipated on the infrastructure and utility systems to meet future FTU or MOB 1 scenario requirements. For the FTU scenario, application of the McConnell AFB diversion rate would result in approximately 2,281 tons of the total 3,802 tons of potential C&D debris being diverted for reuse or recycling, while the MOB 1 scenario would divert 7,736 tons of the total 12,894 tons of potential C&D debris (USEPA 2009). The remaining C&D debris would go to local permitted landfill(s).

No long-term or significant impacts to on- or off-base transportation systems would result from the implementation of either scenario at McConnell AFB. Implementation of the KC-46A FTU scenario at McConnell AFB would result in a slight increase in on-base mission personnel and a 10 percent increase in daily commuting traffic to and from the base. The KC-46A MOB 1 scenario would result in a decrease in on-base mission personnel and a decrease of approximately 1.6 percent in daily commuting traffic to and from the base. Regional access roads and the on-base road network have adequate capacity to absorb the small amount of additional traffic without major impacts on traffic flow, circulation, or level of service.

ES 4.4.9 Hazardous Materials and Waste

Discussion of the minimization or elimination of hazardous materials as it applies to McConnell AFB is described in Section ES 4.1.9.

Demolition, renovation, and addition/alteration projects are planned as part of both the FTU and MOB 1 scenarios at McConnell AFB. Prior to initiating any of the projects, buildings would be evaluated for the presence or absence of asbestos and LBP (Final EIS Volume II, Appendix E, Tables E-5 and E-6). Handling and disposal of asbestos and LBP wastes would be conducted in accordance with applicable regulations.

ES 4.4.10 Socioeconomics

The FTU scenario at McConnell AFB would result in an overall increase in population of 570 people and would result in less than a 0.2 percent change in the county population. The overall decrease in population associated with the MOB 1 scenario would total 291 persons, assuming DoD civilians, part-time Reservists, and contractors are from the local population. A decrease of approximately 291 USAF accompanied, unaccompanied, and family members would result in less than a 0.1 percent decrease in the Sedgwick County population.

Implementation of the FTU scenario would increase on-base jobs by approximately 15.6 percent and would result in approximately 375 indirect and induced jobs in the ROI. Implementation of the MOB 1 scenario would result in an approximate 1.8 percent decrease in on-base jobs and approximately 43 indirect and induced jobs in the ROI would also be lost. For the FTU scenario, it is expected that the local labor force would be sufficient to fill these new jobs without a migration of workers into the area.

The USAF estimates that approximately $154 million in construction and $16 million in operation and maintenance (O&M) expenditures would be required to implement the FTU scenario and approximately $264 million in construction expenditures would be associated with implementing the MOB 1 scenario at McConnell AFB. Construction and O&M expenditures could generate approximately 2,234 and 3,455 jobs for the FTU and MOB 1 scenarios, respectively, primarily within the construction industry or related industries, including architectural, engineering, and related services; food services; private hospitals; and real estate establishments (MIG 2012). It is expected that the local labor force would be sufficient to fill these new jobs. The indirect and

induced income associated with construction expenditures for the FTU and MOB 1 is estimated to be approximately $36 million and $55 million, respectively. These jobs, and the related income, would be temporary during the construction activity.

Implementation of the FTU scenario would result in a potential increase of 141 housing units. Implementation of the MOB 1 scenario would result in a potential decrease in the need for 111 housing units. The housing market in the ROI would be anticipated to support the housing needs associated with the FTU scenario. Based on the current and projected capacities of both on- and off-base lodging and on-base dormitories, there would be adequate facilities available to support the 200 students associated with the FTU scenario. The overall change in the number of base personnel as part of the FTU scenario would result in an increase of 137 school-aged dependents (students) attending any of the 10 public school districts in the county. The students entering the local schools would be of varying ages and would be expected to live in different parts of Sedgwick County. Space available for new enrollments depends on the timing of the relocation and which schools the students would attend. A large influx of students over a short period could result in capacity constraints and could require additional personnel.

Implementation of the MOB 1 scenario would result in a decrease of approximately 108 students in any of the 10 public school districts in the county. This decrease is not anticipated to negatively affect public schools in Sedgwick County.

Base services such as medical facilities dining facilities, recreation and fitness centers, and youth and family services have adequate infrastructure and staffing to support the incoming personnel that would be associated with the FTU or MOB 1 scenario at McConnell AFB.

ES 4.4.11 Environmental Justice and the Protection of Children

Sedgwick County represents the region of comparison for evaluating disproportionate effects (in Chapter 4) on populations of concern for environmental justice and for children. The proportion of minority persons in Sedgwick County (30.08 percent) is much higher than in the State of Kansas (21.82 percent), but lower than the Nation as a whole (36.25 percent). Low-income persons compose a slightly higher proportion (14 percent) of the county's population than in the State of Kansas, but typical of the Nation. The proportion of children in the county population (27.16 percent) is slightly higher than the State of Kansas and the Nation as a whole.

Implementation of the FTU scenario would result in a 3 percent increase in minority population exposure to noise levels between 65 and 69 dB DNL and a 1 percent increase in low-income population exposure to these same noise levels over the baseline noise currently being experienced at McConnell AFB. Because these increases are anticipated to be 3 percent or less over the baseline, no disproportionate impacts on off-base populations of minorities, low-income persons, or children are anticipated to result from implementation of the FTU scenario at McConnell AFB.

As shown on Figure 4-6, the 65–69 dB DNL noise contour resulting from the MOB 1 scenario is completely contained inside the baseline noise contour and the analysis indicates that minority, low-income, and off-base children populations would not be exposed to noise levels above what is occurring under the baseline conditions (see Chapter 4, Table 4-30). However, Table 4-30 indicates a 4 percent increase in the percentage of low-income populations exposed to the 65–69 dB DNL contour. This difference is not an increase in the number of low-income people, but rather is a difference in the proportion of this population exposed to this level of noise.

ES 5.0 CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The assessment of cumulative effects considers other projects that coincide with the location and timetable of implementation of the KC-46A mission. The USAF has identified past and present actions in the region of each of the four bases and more specifically reasonably foreseeable actions that are in the planning phase or unfolding at this time in the regions surrounding Altus AFB in Oklahoma, Fairchild AFB in Washington, Grand Forks AFB in North Dakota, and McConnell AFB in Kansas. Although auxiliary airfields have been identified for use by KC-46A aircrews associated with the FTU scenario at Altus and McConnell AFBs, no construction, ground disturbance, or other activities beyond flight operations are proposed for those locations; therefore, cumulative effects are not evaluated for any of the auxiliary airfields.

The irreversible environmental changes that would result from implementation of the KC-46A scenarios involve the consumption of material resources and energy resources. The use of these resources is considered to be permanent. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the impacts that use of these resources will have on future generations. Irreversible impacts primarily result from use or destruction of a specific resource that cannot be replaced within a reasonable timeframe. Irretrievable resource commitments also involve the loss in value of an affected resource that cannot be restored as a result of the action.

For the beddown of KC-46A aircraft at any of the bases for either the FTU or the MOB 1 scenarios, most resource commitments are neither irreversible nor irretrievable. Most impacts are anticipated to be short term and temporary or longer lasting but negligible.

ES 5.1 ALTUS AFB (FTU OR MOB 1 SCENARIO)

Implementation of the proposed KC-46A scenarios at Altus AFB is not anticipated to contribute to cumulative effects on air quality, safety, biological resources, cultural resources, land use, hazardous materials and waste, and environmental justice and the protection of children.

ES 5.1.1 Noise

Implementation of the FTU or MOB 1 scenario would incrementally increase noise levels on and near Altus AFB. C&D activities in the vicinity of the project locations, in combination with C&D activities proposed as part of the Altus AFB GP, are expected to result only in short-term intermittent increases in noise levels during that phase of work (Altus AFB 2009c).

ES 5.1.2 Soils and Water

The Altus General Plan Environmental Assessment (GPEA) identified one project (proposed construction activities associated with Runway 17L/35R) that had the potential for minor, adverse impacts on floodplains. No other projects with potential soils and water impacts were identified at Altus AFB and no cumulative effects associated with soil and water resources are anticipated.

ES 5.1.3 Infrastructure

The FTU and MOB 1 scenarios would require additional facility C&D when considered in combination with the Altus AFB GP and the associated impacts identified in the Altus GPEA. The FTU scenario would require the construction of new facilities, renovation/ alteration/additions to

existing facilities, and demolition of facilities. The MOB 1 scenario would require more development than the FTU scenario.

The potential for cumulative effects associated with conflicts between either of the KC-46A scenarios and proposed IDP projects at Altus AFB could be off-set by coordinating and including the KC-46A mission in the USAF comprehensive planning process with Air Mobility Command (AMC).

Sound engineering and management practices could minimize cumulative effects during and following construction. All C&D activities generally would be expected to result in short-term job creation and materials procurement. These types of short-term, construction-related benefits would occur regardless of project location.

ES 5.1.4 Socioeconomics

No major new or planned development activities were identified in the Altus area that could combine with the KC-46A beddown scenarios to potentially result in cumulative socioeconomic effects. While it is unknown whether any of these jobs would involve new employees relocating to the Altus area, no significant adverse impacts are expected in combination with the KC-46A FTU or MOB 1 scenario.

ES 5.2 FAIRCHILD AFB (MOB 1 SCENARIO)

Implementation of the KC-46A MOB 1 scenario at Fairchild AFB is not anticipated to contribute to cumulative effects on air quality, safety, soils and water, biological resources, hazardous materials and waste, or environmental justice and the protection of children.

ES 5.2.1 Noise

Under the MOB 1 scenario, noise levels on and near the base would increase slightly. Only short-term, minor, adverse impacts would occur during the construction phase of other military actions identified in Chapter 5, Table 5-3. Because the resulting impacts would be low in intensity and short-term, they would not contribute to a significant cumulative effect.

ES 5.2.2 Cultural Resources

As discussed in Chapter 4, implementation of the MOB 1 scenario at Fairchild AFB would impact one building eligible for the NRHP. To minimize the contribution to cumulative effects on cultural resources, consultation with the Washington SHPO (DAHP) was completed and impacts to historic structures would be mitigated through an Amendment to the existing MOA. Additionally, the demolition projects proposed under the Fairchild AFB Installation Development Environmental Assessment (IDEA) would contribute to cumulative effects on cultural resources (Fairchild AFB 2012d; USAF 2012c).

ES 5.2.3 Land Use

Implementation of the MOB 1 scenario would result in low-intensity impacts from the increased number of air operations because of existing incompatible residential and unspecified commercial and industrial zoning in the APZs. Continued coordination with the local zoning authority to refine land use restrictions in the airport overlay district would reduce the potential for cumulative effects; therefore, there would be no significant cumulative effects on land use.

Fairchild AFB would need to continue coordinating with Spokane County, the Spokane Tribe, and developers to adopt planning and zoning regulations consistent with the Fairchild AFB

Air Installation Compatible Use Zone (AICUZ) and Joint Land Use Study (JLUS) criteria and to implement mitigation measures outlined in the Bureau of Indian Affairs EIS on the West Plains Casino and Mixed-Use Development to minimize cumulative land use effects.

ES 5.2.4 Infrastructure

The MOB 1 scenario proposed for Fairchild AFB would require additional facility C&D above what was included in the existing Fairchild AFB GP, the associated impacts identified in the Fairchild AFB IDEA, and other recent infrastructure-type NEPA actions proposed for Fairchild AFB. The potential for cumulative effects associated with conflicts between the KC-46A MOB 1 scenario and proposed IDP projects at Fairchild AFB can be off-set by coordinating and including the proposed mission in the USAF comprehensive planning process with AMC.

All C&D activities generally would be expected to result in short-term job creation and materials procurement. These types of short-term, construction-related benefits would occur regardless of project location and are not constraints to base development or contributions to significant cumulative effects. Additional impervious surface on the base from the proposed Fairchild AFB GP and other infrastructure projects would require appropriate stormwater system improvements.

Implementation of the MOB 1 scenario would result in short-term, temporary, minor, adverse impacts during the construction phase that would be avoided or reduced through the use of a construction management plan for vehicle safety, traffic, and circulation. During the long-term operational phase, the MOB 1 scenario would bring additional personnel to Fairchild AFB, most of whom would be military personnel and their dependents. The additional personnel would result in an increase of daily commuting to and from the base of 7.5 percent that could result in minor to negligible adverse traffic impacts. The local and regional road network has the capacity to absorb the personnel increase.

The personnel increase during the long-term operational phase, as discussed in Chapter 4 of the Final EIS, would not contribute to significant cumulative effects because the local and regional road network would have sufficient capacity. Traffic associated with implementation of the West Plains Casino and Mixed-Use Development Project has the potential to combine with the construction and mission personnel traffic and could result in the potential for impacts on vehicular transportation roadway network traffic and circulation patterns in the immediate area of the proposed casino development site and Fairchild AFB. The severity of the impacts would depend on the traffic mix of the base and the casino during peak hour periods.

ES 5.2.5 Socioeconomics

The proposed West Plains Casino and Mixed-Use Development Project has the potential to combine with the KC-46A MOB 1 scenario to result in both beneficial and potential adverse cumulative socioeconomic effects. The KC-46A MOB 1 scenario and the proposed West Plains Casino and Mixed-Use Development Project, in combination, would add substantial new direct and indirect revenue-generating capacity to regional municipalities and Spokane County.

If a large number of relocations were associated with both the KC-46A beddown and the proposed casino complex, there could be a shortage of suitable housing. Personnel and families associated with the proposed MOB 1 scenario would require on- or off-base housing. However, for the proposed casino complex, it is anticipated that the majority of employees would come from the Spokane County region and that a large relocation of employees would not occur. Therefore, existing housing would be adequate, resulting in no cumulative contribution.

ES 5.3 GRAND FORKS AFB (MOB 1 SCENARIO)

Implementation of the KC-46A MOB 1 scenario at Grand Forks AFB is not anticipated to contribute to cumulative effects on noise, air quality, safety, soils and water, cultural resources, land use, hazardous materials and waste or environmental justice and the protection of children.

ES 5.3.1 Biological Resources

There is the potential for up to 2 acres of potential wetlands to be impacted by construction activities associated with the KC-46A MOB 1 scenario. Section 404 and 401 permits and mitigation would potentially be required prior to construction. There is the potential for minor, adverse cumulative effects on wetlands when combined with other proposed actions (see Table 5-5 in the Final EIS).

ES 5.3.2 Infrastructure

The proposed KC-46A MOB 1 scenario would require additional facility C&D when considered in combination with the existing Grand Forks AFB GP, the associated impacts identified in the Grand Forks IDEA, and the other infrastructure-type NEPA actions at Grand Forks AFB (see Table 5-5 in the Final EIS). The potential for cumulative effects associated with conflicts between the KC-46A MOB 1 scenario and proposed GP projects at Grand Forks AFB can be off-set by coordinating and including the KC-46A MOB 1 scenario in the USAF comprehensive planning process with AMC. Not all of the projects proposed in the GP are approved or funded yet, and these projects would not be completed in the same timeframe as the projects identified for the KC-46A MOB 1 scenario.

All C&D activities generally would be expected to result in some increased noise, increased air emissions, potential for erosion and transport of sediment into surface water bodies, generation of small amounts of hazardous materials and wastes, and generation of C&D debris. Sound engineering and management practices could minimize cumulative effects during and following construction. Additional impervious surface on the base from the proposed Grand Forks AFB GP and other infrastructure projects would require installation of appropriate stormwater system improvements.

Implementation of the KC-46A MOB 1 scenario would result in short-term, temporary, minor, adverse impacts during the construction phase that would be avoided or reduced through the use of a construction management plan for vehicle safety, traffic, and circulation. Regional access roads and the on-base road network have adequate capacity to absorb the additional traffic without major impacts on traffic flow, circulation, or level of service for the proposed personnel increase.

No other significant increases in population were identified in the Grand Forks, North Dakota, region that would combine with the KC-46A personnel increase to potentially result in adverse traffic capacity or circulation impacts on the local highway system.

ES 5.3.3 Socioeconomics

The City of Emerado, Grand Forks County, and the City of Grand Forks are large enough to absorb off-base demand for housing and municipal services without the occurrence of adverse cumulative effects in combination with current base missions, operations, or planned projects. Base personnel would coordinate the KC-46A MOB 1 scenario with other projects, missions, and operations both on and off base, including the identification of cumulative effects.

ES 5.4 McCONNELL AFB (FTU OR MOB 1 SCENARIO)

Implementation of the KC-46A FTU or MOB 1 scenario at McConnell AFB is not anticipated to contribute to cumulative effects on air quality, safety, biological resources, hazardous materials and waste, or environmental justice and the protection of children.

ES 5.4.1 Noise

The National Guard Bureau is preparing a separate EIS to beddown 12 KC-46A aircraft at a Second Main Operating Base (MOB 2). One of the locations being considered for the MOB 2 is FOE in Kansas where KC-135 aircraft are currently being operated. This action is separate and independent from the FTU and MOB 1 actions that would result from this Final EIS; however, this action is considered in the cumulative effects analysis (as addressed in Chapter 5, Table 5-7 of the Final EIS).

Under the FTU scenario, the active-duty FTU would conduct approximately 977 airfield operations per year at FOE. In the context of the 24,742 airfield operations currently ongoing at FOE, this addition would be expected to result in an increase in DNL of less than 0.2 dB (see Final EIS Volume II, Appendix B, Section B.1.3.2). If the Air National Guard (ANG) were to beddown MOB 2 at FOE, noise from the FTU scenario aircraft operations would be additive to noise generated by MOB 2. KC-46A noise is similar in type and intensity to the aircraft currently operating at FOE. In this context, KC-46A FTU scenario auxiliary airfield operations would comprise a small fraction of overall operations. Noise impacts of the KC-46A FTU scenario operations would not be expected to contribute to significant cumulative noise effects at FOE.

ES 5.4.2 Cultural Resources

None of the buildings proposed to support the FTU scenario at McConnell AFB are considered eligible for listing on the NRHP, and therefore would not contribute to cumulative effects. Three buildings associated with the MOB 1 scenario are considered eligible for listing on the NRHP: 1106, 1107, and 1218.

While there are no known future actions that have the potential to contribute to cumulative cultural resource impacts at McConnell AFB, past actions (such as the mitigated demolition of historical structures) have resulted in minor, adverse cultural impacts. These actions combined with the current potential impacts relating to the KC-46A MOB 1 scenario have a potential to cause minor cumulative effects to cultural resources. McConnell AFB signed a MOA with the Kansas SHPO to mitigate the impacts of the MOB 1 scenario and thereby minimize potential cumulative effects.

ES 5.4.3 Land Use

For either the FTU or MOB 1 scenario, incompatible development currently occurs within APZ I and APZ II. Additionally, the land directly south and east of McConnell AFB has been zoned as a "restricted commercial, warehousing, limited manufacturing" growth area by the City of Derby.

In response to increasing pressure from urban development surrounding the base, the Cities of Derby and Wichita and Sedgwick County, in cooperation with McConnell AFB, completed the McConnell AFB JLUS in 2005. Coordination between McConnell AFB and the Cities of Derby and Wichita needs to continue to minimize the potential impact of future development and encroachment near the base so as not to adversely impact the future of the base by endangering its mission.

ES 5.4.4 Infrastructure

Both the FTU and MOB 1 scenarios would require additional facility C&D when considered in combination with the McConnell AFB IDP and the associated impacts identified in the IDEA.

The IDP includes projects for new construction, infrastructure improvement, natural infrastructure management, strategic sustainability performance (e.g., solar plant), and demolition of facilities (USAF 2012b). The potential for cumulative effects associated with conflicts between either of the KC-46A scenarios and the proposed IDP projects at McConnell AFB can be off-set by coordinating and including the KC-46A mission in the USAF comprehensive planning process with AMC. Not all of the projects proposed in the IDP are approved or funded yet, and these projects would not be completed in the same timeframe as the projects identified for either of the KC-46A scenarios.

All C&D activities at McConnell AFB generally would be expected to result in some increased noise, increased air emissions, potential for erosion and transport of sediment into surface water bodies, generation of small amounts of hazardous materials and wastes, and generation of C&D debris. Additional impervious surface on the base from the proposed IDP projects would require installation of appropriate stormwater system improvements.

ES 5.4.5 Socioeconomics

Any present or future actions that would involve an in- or out-migration of people to the area would result in a cumulative impact on housing, economic activity (in the form of construction, employment, and earnings), educational facilities and staffing, and public and base services. Construction activities typically provide a beneficial economic impact on the area but are short-term for the duration of the project. However, many short-term projects occurring throughout the years provide a cumulative beneficial economic impact over the long-term.

In January 2012, Boeing announced that it would close its Wichita facilities by the end of 2013 (USAF 2012f). Boeing's expansive facilities abut McConnell AFB, and any future uses of those facilities are not known at this time.

Strategies to minimize cumulative effects on socioeconomics could include implementation of comprehensive plans, capital improvement plans, transportation plans, and other plans and coordination efforts that guide future development activities, including coordination with the base.

ES 6.0 DRAFT EIS COMMENT SUMMARY

The Draft EIS comment summary is not included in this ES. Please refer to Chapter 6 of the Final EIS for a listing of the substantive comments received on the Draft EIS and the USAF's response to the substantive comments.

ES 7.0 COMPARISON OF ENVIRONMENTAL CONSEQUENCES

Comparing and differentiating among alternatives is a fundamental premise of the NEPA process. The summary comparison of environmental consequences in Table ES-14 provides an overview of the consequences associated with implementation of the FTU and MOB 1 scenarios at each base along with the No Action alternative. The following NEPA activities have been completed to ensure that decision makers have a comprehensive understanding of the potential environmental consequences of their decision.

- Scoping, with multiple public meetings, conducted over a 2-week period, with public and agency input identifying important environmental resources.
- Documentation of existing environmental conditions for each alternative base. The baseline conditions for these resources relied heavily on recent environmental materials and Federal and state databases prepared at and near each base.
- Base-specific assessments of environmental consequences of the beddown of the KC-46A missions. Each assessment overlaid the development proposed for each scenario upon the baseline conditions to estimate potential base-specific environmental consequences.
- Public hearings were held in mid-November 2013 in the communities surrounding the four bases. Potentially interested parties were invited through the *Federal Register*, newspaper advertisements, and media releases to attend the hearings and provide comments on the Draft EIS.

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Table ES-14. Comparative Summary of Environmental Consequences

Resource Area	Altus AFB		Fairchild AFB	Grand Forks AFB	McConnell AFB		No Action
	FTU	MOB 1	MOB 1	MOB 1	FTU	MOB 1	
Noise	Affected by 65 dB DNL or greater: Off-base Acres: +584 Estimated off-base residents: +17 Auxiliary airfield operations would occur in the context of busy airfields. The relatively small number of proposed KC-46A operations would not result in any meaningful increases in time-averaged noise levels.	Affected by 65 dB DNL or greater: Off-base Acres: +155 Estimated off-base residents: +6	Affected by 65 dB DNL or greater: Off-base Acres: +53 Estimated off-base residents: +2	Affected by 65 dB DNL or greater: Off-base Acres: +62 Estimated off-base residents: 0	Affected by 65 dB DNL or greater: Off-base Acres: +273 Estimated off-base residents: +594 Auxiliary airfield operations would occur in the context of busy airfields. The relatively small number of proposed KC-46A operations would not result in any meaningful increases in time-averaged noise levels.	Affected by 65 dB DNL or greater: Off-base Acres: -386 Estimated off-base residents: -199 Net reduction in time-averaged noise levels would result from replacement of the KC-135 mission.	Under the No Action Alternative, baseline conditions at each base would remain as is. No changes would occur to the noise levels surrounding each base, noise contours would remain as they are today, and no construction related noise would result from implementation of this alternative. Impacts under the No Action Alternative would be negligible.
Air Quality	Emissions from KC-46A FTU operations would not exceed Prevention of Significant Deterioration (PSD) thresholds for volatile organic compounds (VOCs), carbon monoxide (CO), sulfur oxide (SO_x), particulate matter less than or equal to 10 microns in diameter (PM_{10}), or PM less than or equal to 2.5 microns in diameter ($PM_{2.5}$). Although nitrogen oxide (NO_x) emissions from KC-46A FTU operations would exceed 250 tons per year, national ambient air quality standards (NAAQS) would likely not be exceeded. Emissions from KC-46A operations under the FTU scenario at any auxiliary airfield would not exceed an applicable conformity or PSD threshold.	Emissions from KC-46A MOB 1 operations would not exceed PSD thresholds for VOCs, SO_x, PM_{10}, or $PM_{2.5}$. Although CO and NO_x emissions from KC-46A MOB 1 operations would exceed 250 tons per year, NAAQS would likely not be exceeded.	Emissions from KC-46A operations would not exceed PSD thresholds for VOCs, CO, SO_x, PM_{10}, or $PM_{2.5}$. NO_x emissions from KC-46A operations would exceed the 250-tons-per-year PSD threshold. These NO_x emission increases would amount to about 4 percent of the total NO_x emissions generated by Spokane County in 2008, and they could be substantial enough to contribute to an exceedance of the ozone (O_3) NAAQS in the region. The net changes in emissions generated within the Spokane CO and PM_{10} maintenance areas would not exceed the applicable conformity thresholds of 100 tons per year for CO or PM_{10}. Therefore, the MOB 1 scenario at Fairchild AFB would produce less than significant CO and PM_{10} impacts within these areas.	Emissions from KC-46A operations would not exceed PSD thresholds for VOCs, SO_x, PM_{10}, or $PM_{2.5}$. Although CO and NO_x emissions from KC-46A operations would exceed 250 tons per year, AAQS would likely not be exceeded.	Emissions from KC-46A FTU operations would not exceed any PSD pollutant thresholds for VOCs, CO, SO_x, PM_{10}, or $PM_{2.5}$. Although NO_x emission increases from KC-46A FTU operations would exceed the PSD threshold of 250 tons per year, they would likely not have the potential to contribute to an exceedance of the NO_2 NAAQS. NOx emissions generated by operation of the FTU scenario would occur in an area that is in jeopardy of not continuing to attain the NAAQS for O_3. Therefore, the increase in NO_x (and VOC) emissions resulting from operation of the FTU scenario, in combination with existing emissions, could be substantial enough to contribute to an exceedance of the O_3 NAAQS in the region. Emissions from KC-46A operations under the FTU scenario at any auxiliary airfield would not exceed an applicable PSD threshold.	Emissions from KC-46A operations would not exceed 250 tons per year for VOCs, CO, SO_x, PM_{10}, or $PM_{2.5}$. The NO_x emission increases from operation of the MOB 1 scenario would be less than those estimated for the proposed FTU scenario at McConnell AFB. Therefore, similar to the FTU scenario, they would likely not have the potential to contribute to an exceedance of the NO_2 NAAQS. However, the increase in NO_x (and VOC) emissions resulting from operation of the MOB 1 scenario, in combination with existing emissions, could be substantial enough to contribute to an exceedance of the O_3 NAAQS in the region.	Under the No Action Alternative, baseline conditions at each base would remain as is. No construction emissions would occur and operational emissions would be identical to the current baseline conditions. Impacts under the No Action Alternative would be negligible.
	Emissions from construction activities would be below any PSD pollutant threshold of 250 tons per year.						

Table ES-14. Comparative Summary of Environmental Consequences (Continued)

Resource Area	Altus AFB		Fairchild AFB	Grand Forks AFB	McConnell AFB		No Action
	FTU	MOB 1	MOB 1	MOB 1	FTU	MOB 1	
Safety	The basing of KC-46A aircraft under either the FTU or MOB 1 scenario is not anticipated to increase the risk of aircraft accidents due to wildlife strikes. Ongoing elements of the respective base-specific bird/wildlife aircraft strike hazard (BASH) plans would continue. Special briefings and modifications to the BASH plans addressing KC-46A operations and the potential for wildlife strikes would be provided to pilots whenever the potential exists for greater bird strikes within the airspace. KC-46A pilots would be subject to these procedures. Therefore, no significant impact would occur related to bird/wildlife-aircraft strike hazard issues. No unique construction practices or materials would be required as part of any of the renovation, addition, or construction projects associated with the KC-46A beddown scenarios. All renovation and construction activities would comply with all applicable U.S. Occupational Safety and Health Administration (OSHA) regulations to protect workers. In addition, the newly constructed buildings would be built in compliance with antiterrorism/force protection requirements. The USAF does not anticipate any significant safety impacts as a result of construction, demolition, or renovation if all applicable Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) and OSHA requirements are implemented. Proposed construction, renovation, and infrastructure-improvement projects related to the KC-46A aircraft scenarios would be consistent with established APZs at each base.						Under the No Action Alternative, baseline conditions at each of base would remain as is. No additional impacts would occur to flight or ground safety.
Soil and Water Resources	The total disturbed area would be less than five acres.	The total disturbed area would be less than 80 acres.	The total disturbed area would be less than 40 acres.	The total disturbed area would be less than 35 acres.	The total disturbed area would be less than 7 acres.	The total disturbed area would be less than 12 acres. The addition to Building 1220 would impact a floodplain. A Finding of No Practicable Alternative (FONPA) would be prepared should this alternative be selected.	Under the No Action Alternative, baseline conditions at each base would remain as is. None of the KC-46A proposed construction would occur and there would be no additional impacts to soil and water resources.
	Relevant stormwater and land disturbance permits would be required and stormwater plans would be updated. During the design phase, a variety of stormwater controls could be incorporated into construction plans. These could include planting vegetation in disturbed areas as soon as possible after construction; constructing retention facilities; and implementing structural controls such as interceptor dikes, swales (excavated depressions), silt fences, straw bales, and other storm drain inlet protection, as necessary, to prevent sediment from entering inlet structures.						
Biological Resources	No significant impacts on biological resources or wetlands are anticipated to result from implementation of the KC-46A scenarios.			Approximately 2 acres of potentially jurisdictional wetlands would be impacted. Section 404 and 401 permits and mitigation would be required should this alternative be selected.	No significant impacts on biological resources or wetlands are anticipated to result from implementation of the KC-46A scenarios.		Under the No Action Alternative, baseline conditions at each base would remain as is. No vegetation or wildlife habitat would be disturbed. No additional impacts to biological resources would be anticipated.

Table ES-14. Comparative Summary of Environmental Consequences (Continued)

Resource Area	Altus AFB		Fairchild AFB	Grand Forks AFB	McConnell AFB		No Action
	FTU	MOB 1	MOB 1	MOB 1	FTU	MOB 1	
Cultural Resources	No adverse effect on one historic property. Oklahoma State Historic Preservation Office (SHPO) has concurred with the USAF's determination that modifications proposed for Building 285 as part of the KC-46A undertaking will not adversely affect the building's National Register of Historic Places (NRHP) eligibility (letter from SHPO to USAF dated 29 July 2013), concluding the Section 106 consultation process. No adverse Section 106 impacts to tribal resources are anticipated. Consultation with 10 tribes resulted in no disagreement with the USAF finding of no adverse impact. Section 106 consultation for the KC-46A FTU and MOB 1 beddown proposed alternatives at Altus AFB is now complete.		Adverse impact to Building 2050 (hangar) and a potential adverse impact to Building 2245 (letter from SHPO to USAF dated 25 June 2013). National Historic Preservation Act (NHPA) Section 106 consultation with the Washington Department of Archaeology and Historic Preservation (DAHP) concluded with an amendment to an existing Memorandum of Agreement (MOA) to address the possibility of adverse effects to Building 2050 (hangar) and Building 2245. No adverse Section 106 impacts are anticipated to tribal resources. Consultation with four tribes resulted in no disagreement with the USAF finding of no adverse impact. Section 106 consultation for the KC-46A MOB 1 beddown proposed alternative at Fairchild AFB is now complete.	NHPA Section 106 SHPO consultation has been completed and includes no impacts on architectural resources. The North Dakota SHPO has concurred with the USAF's finding that no historic properties would be affected (letter from SHPO to USAF dated 8 July 2013). No adverse Section 106 impacts to tribal resources are anticipated. The USAF consulted with 23 tribes and one tribe expressed concerns regarding the potential for impacts. Following further consultation with the one tribe, the USAF concluded consultation with a finding of no adverse impact. Section 106 consultation for the KC-46A MOB 1 beddown proposed alternative at Grand Forks AFB is now complete.	No adverse effects are anticipated on architectural resources or other historic properties. The Kansas SHPO has concurred with the USAF's finding (letter from SHPO to USAF dated 18 June 2013). No adverse Section 106 impacts to tribal resources are anticipated. Consultation with 12 tribes resulted in no disagreement with the USAF finding of no adverse impact. Section 106 consultation for the KC-46A FTU beddown proposed alternative at McConnell AFB is now complete.	Adverse effect on NRHP-eligible Building 1106; no adverse effect on historic properties for modifications to Buildings 1107 and 1218 (letter from SHPO to USAF dated 26 August 2013). McConnell AFB and the Kansas SHPO have signed a MOA agreeing to measures that mitigate the adverse effect on historic properties that would result from the selection of McConnell AFB for the MOB 1 scenario. No adverse Section 106 impacts to tribal resources are anticipated. Consultation with 12 tribes resulted in no disagreement with the USAF finding of no adverse impact. Section 106 consultation for the KC-46A MOB 1 beddown proposed alternative at McConnell AFB is now complete.	Under the No Action Alternative, baseline conditions at each base would remain as is. No additional impacts to historical buildings or other cultural resources would occur.
	Impacts on archaeological resources are not expected. All project areas have been surveyed. Inadvertent discovery of previously unrecorded cultural resources would be managed in compliance with Federal and state laws and USAF regulations. Impacts on traditional cultural resources are unlikely; consultation with tribes resulted in no disagreement with the finding that there are no known tribal traditional cultural properties or traditional cultural resources at any base. Refer to Volume II, Appendix A, Section A.3, for consultation detail.						
Land Use	All new construction would occur in the appropriate base land use areas with no incompatible development planned. No impacts on land use on base from construction projects or noise from air operations are anticipated.						Under the No Action Alternative, baseline conditions at each base would remain as is. No changes would occur to planning noise contours surrounding the bases and no land use changes would occur within the base boundaries.
	Implementation of the FTU scenario would increase the off-base area affected by noise levels of 65 dB DNL or greater by 580 acres, which is mostly agricultural land and existing low-density residential land. There would be no significant effects on land use at any of the four auxiliary airfields as a result of the slight increase in aircraft operations noise.	Implementation of the MOB 1 scenario would increase the off-base area affected by noise levels of 65 dB DNL or greater by 155 acres, which is mostly agricultural land and existing low-density residential land. No significant effects are anticipated on land use resources.	Implementation of the MOB 1 scenario would increase the off-base area affected by noise levels of 65 dB DNL or greater by 53 acres, while there would be a reduction of the affected area on base. The off-base area is primarily vacant and no residential areas would be affected. There would be a minor impact from the increased number of aircraft operations because of existing incompatible residential land use within the northern APZ II.	Implementation of the MOB 1 scenario would increase the on- and off-base areas affected by noise levels of 65 dB DNL or greater by 62 acres. Surrounding areas are agricultural and low-density residential and were previously exposed to KC-135 aircraft operations from Grand Forks AFB.	Because the FTU scenario is additive to the existing KC-135 mission, an additional 273 acres off base and 594 people would be exposed to noise levels of 65 dB DNL or greater. The affected area includes mixed-density residential areas in Eastridge to the north and some homes in residentially zoned land to the southwest of the airfield. There would be an adverse impact on existing incompatible residential, commercial, and industrial land in the CZs and APZs from the increased number of operations at the airfield. Recommend continued coordination with local jurisdictions to provide more compatible land use zoning surrounding the airfield.	Implementation of the MOB 1 scenario would result in a net benefit to surrounding land (-386 acres) and people (-199) due to the net decrease in acres and estimated residents exposed to noise levels of 65 dB DNL or greater.	

Table ES-14. Comparative Summary of Environmental Consequences (Continued)

Resource Area	Altus AFB		Fairchild AFB	Grand Forks AFB	McConnell AFB		No Action
	FTU	MOB 1	MOB 1	MOB 1	FTU	MOB 1	
Infrastructure	Implementation of the FTU scenario would increase the average daily demand for potable water from 30 to 37 percent of base system capacity and peak demand from 51 to 59 percent. Daily discharge to the wastewater system would increase from 4 to 6 percent of base system capacity and peak discharge would increase from 6 to 8 percent. Daily demand for electricity would increase from 12 to 16 percent of base system capacity and peak demand would increase from 15 to 18 percent. Daily demand for natural gas would increase from 9 to 14 percent of base system capacity and peak demand would increase from 23 to 28 percent. Implementation of the FTU scenario would disturb less than 5 acres of land. Construction activities would be conducted in accordance with the applicable stormwater discharge permit to control erosion and prevent sediment, debris, or other pollutants from entering the stormwater system. Implementation of the FTU scenario would result in approximately 1,937 tons of C&D debris to be recycled or reused and approximately 1,292 tons to be transported to the City of Altus Landfill or other landfills in the region. Regarding on-base transportation systems, on-base mission personnel vehicle trips would potentially increase by 12 percent and no level-of-service impacts are anticipated.	Implementation of the MOB 1 scenario would increase the average daily demand for potable water from 30 to 82 percent of base system capacity and peak demand from 51 to 103 percent of contracted amount. Daily discharge to the wastewater system would increase from 4 to 19 percent of base system capacity and peak discharge would increase from 6 to 21 percent. Daily demand for electricity would increase from 12 to 35 percent of base system capacity and peak demand would increase from 15 to 37 percent. Daily demand for natural gas would increase from 9 to 43 percent of base system capacity and peak demand would increase from 23 to 57 percent. Implementation of the MOB 1 scenario would disturb less than 80 acres of land. Construction activities would be conducted in accordance with the applicable stormwater discharge permit to control erosion and prevent sediment, debris, or other pollutants from entering the stormwater system. Implementation of the MOB 1 scenario would result in approximately 29,417 tons of C&D debris to be recycled or reused and approximately 19,611 tons to be transported to the City of Altus Landfill or other landfills in the region. Regarding on-base transportation systems, on-base mission personnel vehicle trips would increase by 54 percent and no level-of-service impacts are anticipated. However, this would increase congestion and queuing at the Main Gate and Commercial Gate during peak morning and evening traffic.	Implementation of the MOB 1 scenario would increase the average daily demand for potable water from 16 to 18 percent of base system capacity and peak demand from 44 to 46 percent. Daily discharge to the wastewater system would increase from 39 to 45 percent of base system capacity and peak discharge would increase from 70 to 77 percent. Increases in electrical use and natural gas associated with new facilities and increases in personnel and dependents are anticipated to be less than 1 percent of state-wide residential electrical/natural gas usage. Implementation of the MOB 1 scenario would disturb less than 40 acres of land. Construction activities would be conducted in accordance with the applicable stormwater discharge permit to control erosion and prevent sediment, debris, or other pollutants from entering the stormwater system. Implementation of the MOB 1 scenario would result in approximately 13,763 tons of C&D debris to be recycled or reused and approximately 9,175 tons to be transported to landfills in the region. On-base mission personnel vehicle trips would increase by 7.5 percent. No level-of-service impacts are anticipated. This could increase congestion and queuing at the Main Gate and Thorpe/Rambo Gate during peak morning and evening traffic.	Implementation of the MOB 1 scenario would increase the average daily demand for potable water from 16 to 41 percent of base system capacity. Daily discharge to the wastewater system would increase from 42 to 94 percent of base system capacity. Daily demand for electricity would increase from 17 to 43 percent of base system capacity. Daily demand for natural gas would increase from 11 to 31 percent of base system capacity. Implementation of the MOB 1 scenario would disturb less than 35 acres of land. Construction activities would be conducted in accordance with the applicable stormwater discharge permit to control erosion and prevent sediment, debris, or other pollutants from entering the stormwater system. Implementation of the MOB 1 scenario would result in approximately 28,738 tons of C&D debris to be recycled or reused and approximately 19,159 tons to be transported to landfills in the region. On-base mission personnel vehicle trips would increase by approximately 70 percent. No level-of-service impacts are anticipated. However, this would increase congestion and queuing at the Main Gate and Commercial Gate during peak morning and evening traffic.	Implementation of the FTU scenario would increase the average daily demand for potable water from 10 to 15 percent of base system capacity and peak demand from 14 to 19 percent. Daily discharge to the wastewater system would increase from 7 to 9 percent of base system capacity and peak discharge would increase from 27 to 29 percent. Daily demand for electricity would increase from 47 to 56 percent of base system capacity and peak demand would increase from 60 to 69 percent. Daily demand for natural gas would increase from 16 to 23 percent of base system capacity and peak demand would increase from 36 to 43 percent. Implementation of the FTU scenario would disturb less than 7 acres of land. Construction activities would be conducted in accordance with the applicable stormwater discharge permit to control erosion and prevent sediment, debris, or other pollutants from entering the stormwater system. Implementation of the FTU scenario would result in approximately 2,281 tons of C&D debris to be recycled or reused and approximately 1,521 tons to be placed in the Brooks or Construction, Demolition & Recycle (CDR) Landfill or a combination of both. On-base mission personnel vehicle trips would increase by 10 percent. No level-of-service impacts are anticipated.	Implementation of the MOB 1 scenario would increase the average daily demand for potable water from 10 to 11 percent of base system capacity and peak demand from 14 to 15 percent. The peak discharge to the wastewater system would increase from 27 to 28 percent of base system capacity, but average daily discharge would remain unchanged at 7 percent. Daily demand for electricity would increase from 47 to 48 percent of base system capacity and peak demand would increase from 60 to 61 percent. Daily demand for natural gas would increase from 16 to 17 percent of base system capacity and peak demand would increase from 36 to 38 percent. Implementation of the MOB 1 scenario would disturb less than 12 acres of land. Construction activities would be conducted in accordance with the applicable stormwater discharge permit to control erosion and prevent sediment, debris, or other pollutants from entering the stormwater system. Implementation of the MOB 1 scenario would result in approximately 7,736 tons of C&D debris to be recycled or reused and approximately 5,158 tons to be placed in the Brooks or CDR Landfill or a combination of both. On-base mission personnel vehicle trips would decrease by approximately 2 percent. No level-of-service impacts are anticipated.	Under the No Action Alternative, baseline conditions at each base would remain as is. No new construction would occur and no new personnel would arrive or decrease at any of the bases. No additional impacts to the infrastructure system at any of the bases would occur.

Table ES-14. Comparative Summary of Environmental Consequences (Continued)

Resource Area	Altus AFB		Fairchild AFB	Grand Forks AFB	McConnell AFB		No Action
	FTU	MOB 1	MOB 1	MOB 1	FTU	MOB 1	
Hazardous Materials and Waste	The types of hazardous materials and wastes are consistent with those currently being utilized and generated by the KC-135 mission, but the quantities of hazardous materials used and wastes generated would increase.			The quantities and types of hazardous materials used and wastes generated would increase relative to the current RPA missions, but would be consistent with those utilized and generated by the previous KC-135 mission.	The types of hazardous materials and wastes are consistent with those currently being utilized and generated by the KC-135 mission, but the quantities of hazardous materials used and wastes generated would increase.		Under the No Action Alternative, baseline conditions at each base would remain as is. Each base would continue to use hazardous materials and dispose of hazardous waste as described for each base's baseline conditions.
	The systems engineering process has eliminated halon and minimized the use of the hazardous materials hexavalent chromium and cadmium. Other hazardous materials such as trichloroethane have available alternates and would not be required for the KC-46A. The preference would be to use the least hazardous material when alternatives are available. Any structures proposed for upgrade or retrofit would be inspected for asbestos-containing materials (ACM) and lead-based paint according to established procedures. Modifications and/or additions to existing buildings would occur in proximity to existing Environmental Restoration Program (ERP) sites. Formal construction waivers are not required, but the USAF requires the review of excavation and/or construction siting and compatibility with environmental cleanup sites to be conducted and documented in accordance with current environmental impact analysis processes. During the design phase for each development project, proximity to the various types of ERP sites will be evaluated to determine if additional costs will need to be included in project estimates to maintain the proper land use controls and the groundwater monitoring well networks and to incorporate proper health and safety precautions into construction plans.						
Socioeconomics (all numbers are approximated)	***Population*** Overall increase in population to Jackson County from incoming military personnel, students, and family members (does not include DoD civilians, part-time Reservists, or contractors): 578 (2.2 percent increase in region of influence [ROI]). ***Economic Activity*** Total increase on-base full-time military personnel, students, DoD civilians, and contractors: 619 (15.9 percent increase of on-base jobs). Total construction costs of $52 million and O&M costs of $11 million could generate 909 jobs and $4 million in indirect and induced income for the duration of the construction activity. ***Housing*** Assuming all 144 incoming full-time military personnel would require off-base housing, the housing market in the ROI would be anticipated to support the incoming personnel. Adequate facilities on and off base are available to support the incoming students. ***Education*** An estimated 140 military dependents of school age would enter any of the six school districts in Jackson County.	***Population*** Overall increase in population to Jackson County from incoming military personnel and family members (does not include DoD civilians, part-time Reservists, or contractors): 4,917 (18.6 percent increase in ROI). ***Economic Activity*** Total increase on-base full-time military personnel, DoD civilians, and contractors: 1,922 (49 percent increase of on-base jobs). Total construction costs of $400 million could generate 5,628 jobs and $24 million in indirect and induced income for the duration of the construction activity. ***Housing*** The housing market in the ROI and surrounding communities within adjacent counties would be anticipated to support the incoming personnel. An HRMA would be required. ***Education*** An estimated 1,826 military dependents of school-age would enter any of the six school districts in Jackson County or surrounding communities based upon where incoming military personnel reside.	***Population*** Overall increase in population to Spokane County from incoming military personnel and family members associated with the KC-46A MOB 1 scenario and the drawdown of military personnel and family members associated with the KC-135 (does not include DoD civilians, part-time Guardsmen, or contractors): 1,095 (0.2 percent increase in ROI). ***Economic Activity*** Total increase on-base full-time military personnel, DoD civilians, and contractors: 438 (9.7 percent increase of on-base jobs). Total construction costs of $292 million could generate 3,022 jobs and $65.5 million in indirect and induced income for the duration of the construction activity. ***Housing*** Assuming all 1,656 incoming full-time military personnel associated with KC-46A would require off-base housing, and all 1,239 outgoing full-time military personnel associated with KC-135 would depart from off-base housing, the housing market in the ROI would be anticipated to support the change in personnel. An HRMA would be required. ***Education*** An estimated 407 military dependents of school age would be anticipated to enter the Spokane Public School District.	***Population*** Overall increase in population to Grand Forks County from incoming military personnel and family members (does not include DoD civilians, part-time Guardsmen, or contractors): 4,526 (6.8 percent increase in ROI). ***Economic Activity*** Total increase on-base full-time military personnel, DoD civilians, and contractors: 1,747 (69 percent increase of on-base jobs). Total construction costs of $345 million could generate 4,326 jobs and $51 million in indirect and induced income for the duration of the construction activity. ***Housing*** Assuming all 1,724 incoming full-time military personnel would require off-base housing, the housing market in the ROI would be anticipated to support the incoming personnel. An HRMA would be required. ***Education*** Approximately 1,681 military and non-military dependents of school age would enter any of the nine public school districts in Grand Forks County.	***Population*** Overall increase in population to Sedgwick County from incoming military personnel and family members and students (does not include DoD civilians, part-time Reservists, or contractors): 570 (0.2 percent increase in ROI). ***Economic Activity*** Total increase on-base full-time military personnel, DoD civilians, students, and contractors: 679 (15.6 percent increase of on-base jobs). Total construction costs of $154 million and O&M costs of $16 million could generate 2,234 jobs and $36 million in indirect and induced income for the duration of the construction activity. ***Housing*** Assuming all 141 incoming full-time military personnel would require off-base housing, the housing market in the ROI would be anticipated to support the incoming personnel. Adequate facilities on and off base are available to support the incoming students. ***Education*** Approximately 137 military dependents of school age would enter any of the 10 public school districts in Sedgwick County.	***Population*** Overall decrease in population to Sedgwick County from incoming military personnel and family members associated with the KC-46A MOB 1 scenario and the drawdown of military personnel and family members associated with the KC-135 (does not include DoD civilians, part-time Reservists, or contractors): -291 (0.1 percent decrease in ROI). ***Economic Activity*** Total change of on-base full-time military personnel, DoD civilians and contractors: -77 (1.8 percent decrease of on-base jobs). Total construction costs of $264 million could generate 3,456 jobs and $55 million in indirect and induced income for the duration of the construction activity. ***Housing*** Assuming all 1,809 incoming full-time military personnel associated with KC-46A would require off-base housing, and all 1,920 outgoing full-time military personnel associated with KC-135 would depart from off-base housing, the housing market in the ROI would be anticipated to support the change in personnel. An HRMA would be required. ***Education*** Approximately 108 military dependents of school age would no longer attend the county schools.	Under the No Action Alternative, baseline conditions would remain as is. No new personnel increases or decreases would occur at any of the bases and none of the bases would receive the benefits of a population increase. No construction would occur and therefore no construction related beneficial expenditures would occur.

Table ES-14. Comparative Summary of Environmental Consequences (Continued)

Resource Area	Altus AFB		Fairchild AFB	Grand Forks AFB	McConnell AFB		No Action
	FTU	MOB 1	MOB 1	MOB 1	FTU	MOB 1	
Socioeconomics (Continued) (all numbers are approximated)	***Public Services*** Demand for public services in Jackson County has increased for several years and would continue to increase with incoming population. ***Base Services*** There are adequate infrastructure and staffing to support incoming military populations.	***Public Services*** Although this scenario would increase the demand for public services, because of the need for additional housing, some of the incoming personnel might reside in surrounding counties where additional public services are available. ***Base Services*** Several Base services would require additional manpower and facilities to accommodate the incoming personnel.	***Public Services*** Public services would be anticipated to support the incoming population. ***Base Services*** Base services have adequate capacity in the CDC, housing, fitness, and dining facilities under the existing infrastructure to support the proposed MOB 1 scenario due to the drawdown of the KC-135 mission.	***Public Services*** The increase in the county population would slightly impact police, fire, or other services and could require additional manpower to support the incoming population. ***Base Services*** There is adequate infrastructure and capacity to support incoming military populations.	***Public Services*** Public services would be anticipated to support the incoming population. ***Base Services*** There are adequate infrastructure and staffing to support incoming military population.	***Public Services*** Public services would be anticipated to support the change in population. ***Base Services*** There are adequate infrastructure and staffing to support incoming military, particularly with the KC-135 drawdown.	
Environmental Justice and the Protection of Children	Implementation of either scenario at any of the bases is not anticipated to disproportionately impact any minority, low-income, or off-base children populations.						Under the No Action Alternative, baseline conditions at each base would remain as is. There would be no environmental justice impacts or impacts to populations of children at any of the bases.

ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
AFB	Air Force Base
AFOSH	Air Force Occupational and Environmental Safety, Fire Protection, and Health
AFW	Fort Worth Alliance Airport
AGL	above ground level
AICUZ	Air Installation Compatible Use Zone
AMA	Rick Husband Amarillo International Airport
AMC	Air Mobility Command
ANG	Air National Guard
APZ	accident potential zone
AR	air refueling
ARW	Air Refueling Wing
BASH	Bird/Wildlife-Aircraft Strike Hazard
C&D	construction and demolition
CDC	child development center
CDR	Construction, Demolition & Recycle
CEQ	Council on Environmental Quality
CFR	*Code of Federal Regulations*
CO	carbon monoxide
CONUS	continental United States
CSM	Clinton-Sherman Industrial Airpark
CWA	Clean Water Act
CZ	clear zone
DAHP	Department of Archaeology and Historic Preservation
dB	decibel(s)
DNL	day-night average sound level
DoD	U.S. Department of Defense
DoDI	Department of Defense Instruction
EIS	Environmental Impact Statement
EO	Executive Order
ERP	Environmental Restoration Program
ES	Executive Summary
FOE	Forbes Field
FONPA	Finding of No Practicable Alternative
FTU	Formal Training Unit
GP	General Plan
GPEA	General Plan Environmental Assessment
HRMA	Housing Requirements and Market Analysis
ICRMP	Integrated Cultural Resources Management Plan
ICT	Wichita Mid-Continent Airport
IDEA	Installation Development Environmental Assessment
IDP	Installation Development Plan
IOT&E	Initial Operational Testing and Evaluation
JLUS	Joint Land Use Study
LBB	Lubbock Preston Smith International Airport

ACRONYMS AND ABBREVIATIONS (Continued)

LBP	lead-based paint
MOA	Memorandum of Agreement
MOB 1	First Main Operating Base
MOB 2	Second Main Operating Base
NAAQS	National Ambient Air Quality Standards
NDDH	North Dakota Department of Health
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NRHP	National Register of Historic Places
O&M	operation and maintenance
O_3	ozone
OSHA	Occupational Safety and Health Administration
PM_{10}	particulate matter less than or equal to 10 microns in diameter
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
PSD	Prevention of Significant Deterioration
ROI	region of influence
RPA	remotely piloted aircraft
SEL	sound exposure level
SHPO	State Historic Preservation Office
SO_x	sulfur oxides
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound
WIC	Weapons Instructor Course